

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1	WYC-Susp (2.5Y 6/2)	XRD	Rigaku, D/max-2000	구성광물 분석은 모델명 Rigaku, D/max-2000의 X-선 회절분석기로 분석 조건 CuKα, 40 kV, 35 mA, 주사속도 1° 2 θ/min로 분석하였다.	와야전 유입수 부유물 회갈색	안동댐과 임하댐 퇴적물 및 유입 부유물 질의 중금속 특성 연구 (한국광물학회지 v32n2p103-111)	36.592778 128.767222
2	ADD-Susp (1.25Y 5/2)	XRD	Rigaku, D/max-2000	구성광물 분석은 모델명 Rigaku, D/max-2000의 X-선 회절분석기로 분석 조건 CuKα, 40 kV, 35 mA, 주사속도 1° 2 θ/min로 분석하였다.	안동댐 유입수 부유물질 어두운 회갈색	안동댐과 임하댐 퇴적물 및 유입 부유물 질의 중금속 특성 연구 (한국광물학회지 v32n2p103-111)	36.587778 128.773889
3	ADD-Depo (3.75Y 7/2)	XRD	Rigaku, D/max-2000	구성광물 분석은 모델명 Rigaku, D/max-2000의 X-선 회절분석기로 분석 조건 CuKα, 40 kV, 35 mA, 주사속도 1° 2 θ/min로 분석하였다.	안동댐 퇴적물 회황색	안동댐과 임하댐 퇴적물 및 유입 부유물 질의 중금속 특성 연구 (한국광물학회지 v32n2p103-111)	36.587778 128.773889
4	IHD-Susp (6.25YR 4/2)	XRD	Rigaku, D/max-2000	구성광물 분석은 모델명 Rigaku, D/max-2000의 X-선 회절분석기로 분석 조건 CuKα, 40 kV, 35 mA, 주사속도 1° 2 θ/min로 분석하였다.	임하댐 유입수 부유물 어두운 갈색	안동댐과 임하댐 퇴적물 및 유입 부유물 질의 중금속 특성 연구 (한국광물학회지 v32n2p103-111)	36.537222 128.881944
5	IHD-Depo (8.75YR 7/2)	XRD	Rigaku, D/max-2000	구성광물 분석은 모델명 Rigaku, D/max-2000의 X-선 회절분석기로 분석 조건 CuKα, 40 kV, 35 mA, 주사속도 1° 2 θ/min로 분석하였다.	임하댐 퇴적물 탁한주황색	안동댐과 임하댐 퇴적물 및 유입 부유물 질의 중금속 특성 연구 (한국광물학회지 v32n2p103-111)	36.537222 128.881944
6		박편 사진	편광현미경	XPL microscopic pictures of thin section	stage 1-3 박편 사진	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
7		박편 사진	편광현미경	XPL microscopic pictures of thin section	stage 3 박편 사진	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
8		박편 사진	편광현미경	XPL microscopic pictures of thin section	stage 4 박편 사진	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
9		XRD	D8 advance diffractometer (Bruker AXS)	분석 조건은 CuKα 회절 X선을 이용하여 가속전압 40 kV, 빔 전류 40mA, 회절 패턴은 5 °~60 ° 2θ 구간, 시간당 0.1 ° 스텝 방법을 이용하였다.	광석 광물의 각 시기별 XRD 분석결과	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
10		XRD	D8 advance diffractometer (Bruker AXS)	분석 조건은 CuKα 회절 X선을 이용하여 가속전압 40 kV, 빔 전류 40mA, 회절 패턴은 5 °~60 ° 2θ 구간, 시간당 0.1 ° 스텝 방법을 이용하였다.	광석 광물의 각 시기별 XRD 분석결과	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
11		XRD	D8 advance diffractometer (Bruker AXS)	분석 조건은 CuKα 회절 X선을 이용하여 가속전압 40 kV, 빔 전류 40mA, 회절 패턴은 5 °~60 ° 2θ 구간, 시간당 0.1 ° 스텝 방법을 이용하였다.	광석 광물의 각 시기별 XRD 분석결과	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
12		XRD	D8 advance diffractometer (Bruker AXS)	분석 조건은 CuKα 회절 X선을 이용하여 가속전압 40 kV, 빔 전류 40mA, 회절 패턴은 5 °~60 ° 2θ 구간, 시간당 0.1 ° 스텝 방법을 이용하였다.	광석 광물의 각 시기별 XRD 분석결과	황강리 광화대 인성 금-은 광상의 광화 유체 진화 (한국광물학회지 v31n4p307-323)	36.866389 127.946111
13	GUDAM, SAIN	화강암 미량원소 성분분석	유도결합플라즈마 질량 분석기(Perkin Elmer Nexlon 350)	전암 미량원소 성분분석		단양 지질공원 구담봉-사이암 지질명소 화강암의 SHRIMP 저어콘 U-Pb 연령과 지구화학 (암석학회지 v28n2p143-156)	37.480000 130.910000

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14	GUDAM, SAIN	저어콘 이미지	SEM; JEOL-6610LV	후방산란전자 및 음극선 발광 영상	지구화학 성분 분석과 저어콘 U-Pb 연령 측정을 위해 구담봉과 사인암에서 채취한 시료를 각각 파쇄하였다. 저어콘 분리는 유압파쇄기와 링밀을 이용하여 시료를 파쇄한 후 선풍팬과 흐르는 물을 이용하여 저어콘을 분리하는 방식을 사용하였다. 이에 추가적으로 요오드화 메틸렌 (diiodomethane; d=3.32)를 이용하는 중 액선별법도 함께 사용하였다(Cheong et al., 2013). 분리된 저어콘들은 저어콘 표준 시료와 함께 예콕시마운트에 시료별로 고정시킨 후, 저어콘 결정들이 평탄하게 절반 정도가 드러날 때까지 연마하였다. 연마된 저어콘 결정들의 내부 조직을 관찰하기 위해 한국기초과학지원연구원 오창센터의 주사전자현미경(SEM; JEOL-6610LV)을 이용하여 후방산란전자(BSE) 및 음극선발광(CL) 영상을 촬영하였다(Fig.	단양 지질공원 구담봉-사이암 지질명소 화강암의 SHRIMP 저어콘 U-Pb 연령과 지구화학 (암석학회지 v28n2p143-156)	37.480000 130.910000
15	하즈버그자이트 (Harzburgite)	XRF 분석	Innov-X System사 휴대용 XRF	XRF 분석	XRF 분석은 트렌치 단면 내 0-100 m 구간에 걸쳐 각 1 m의 간격으로 표면이 정리된 단면 내 평탄한 면이나 노두에 대해 총 101개 의 지점을 측정하였으며, 이에 대한 결과는 표 1과 같다.	트렌치 조사를 통한 미얀마 북서부 보피봉 크롬철석 광화대 연장성 연구 (지질학회지 v50n2p293-307)	23.155181 93.820165
16	사문암(Serpentinite)	XRF 분석	Innov-X System사 휴대용 XRF	XRF 분석	XRF 분석은 트렌치 단면 내 0-100 m 구간에 걸쳐 각 1 m의 간격으로 표면이 정리된 단면 내 평탄한 면이나 노두에 대해 총 101개 의 지점을 측정하였으며, 이에 대한 결과는 표 1과 같다.	트렌치 조사를 통한 미얀마 북서부 보피봉 크롬철석 광화대 연장성 연구 (지질학회지 v50n2p293-307)	23.155181 93.820165
17	더나이트(Dunite)	XRF 분석	Innov-X System사 휴대용 XRF	XRF 분석	XRF 분석은 트렌치 단면 내 0-100 m 구간에 걸쳐 각 1 m의 간격으로 표면이 정리된 단면 내 평탄한 면이나 노두에 대해 총 101개 의 지점을 측정하였으며, 이에 대한 결과는 표 1과 같다.	트렌치 조사를 통한 미얀마 북서부 보피봉 크롬철석 광화대 연장성 연구 (지질학회지 v50n2p293-307)	23.155181 93.820165
18	Boam Li ore	K-Ar 연대측정	K 함량 은 원자흡광분석기(Atomic Absorption Spectrometer, Unicam 989 모델), Ar은 고정 진공 질량분석기(Static Vacuum Mass Spectrometer, VG 5400 모델)	광화 작용이 일어난 시기를 알아보기 위하여 레피돌라이트와 백운모에 대한 K-Ar 연령을 측정하였다. 연령 측정을 위해 리튬 광석 시료를 파쇄한 후에 탈이온수로 세척하고 건조시킨 후 실체현미경 하에서 분리하였으며, K-Ar 연령 측정은 한국기초과학지원연구원 오창센터에 의뢰하여 수행하였다. K 함량은 원자흡광분석기(Atomic Absorption Spectrometer, Unicam 989 모델)를 이용하여 측정하였고, Ar은 고정 진공 질량분석기(Static Vacuum Mass Spectrometer, VG 5400 모델)를 이용하여 분석하였다.	분석 결과는 표2 에서 보여주는 것처럼, 각각 186.1~160.8 Ma(백운모), 169.3~160.1 Ma (각력상 리튬광석의 레피돌라이트), 160.8~154.6 Ma (맥상 리튬광석의 레피돌라이트) 로 주라기 초기에서부터 말기에 걸쳐 연구지역 일대에 열수의 유입이 있었으나, 리튬 운모인 레피돌라이트의 주 광화작용 시기는 주라기 중기에 서 말기 동안에 있었음을 알 수 있다.	울진 왕피리 보암 리튬광상의 성인 (지질학회지 v50n4p489-500)	36.905833 129.211944

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19	Boam Li ore	주원소, 미량원소 분석	유도결합 플라즈마 질량 분석기(ICP-MS); X-선형 광분광분석(XRF);유도결합 플라즈마 질량분석기(ICP-MS); 유도결합 플라즈마 분광기(ICP-AES)	광석에 대한 주원소와 미량원소 분석은 한국기초과학지원연구원 서울센터에 의뢰하여 실시하였다. 주원소 분석은 유도결합 플라즈마 질량분석기(ICP-MS)를 이용하여 분석한 Li2O 를 제외한 다른 모든 원소들에 대해 X-선형광분광분석(XRF)법을 이용하여 수행하였고, 미량원소 분석은 유도결합 플라즈마 질량분석기(ICP-MS)와 유도결합플라즈마 분광기(ICP-AES)를 이용하여 수행하였다.	각력상 광석의 리튬 함량은 평균 4.70 wt.%인 반면에, 맥상 광석의 리튬 함량은 1.88 wt.%로 각력상 광석에 더 많은 리튬이 함유되어 있다. 이러한 리튬 함량의 차이는 광석 내에 들어있는 리튬의 주요 광물인 레피돌라이트 함량의 차이에서 주로 기인한 것으로, 육안으로 관찰했을 때각력상 리튬광석이 맥상 리튬광석보다 더 짙은 자주색을 보여주는 것도 이러한 차이에 따른 것으로 여겨진다.	울진 왕피리 보암 리튬광상의 성인 (지질학회지 v50n4p489-500)	36.905833 129.211944
20	Boam Li ore	산소, 탄소 동위원소 분석	Thermo Scientific사의 GasBench II와 연결된 Delta V Plus 질량분석기(Isotope Ratio Mass Spectrometry: IRMS)	석회암에 대한 산소와 탄소 안정동위원소 분석은 한국기초과학지원연구원 오창센터에 의뢰하였으며, 분석기기는 Thermo Scientific사의 GasBench II와 연결된 Delta V Plus 질량분석기(Isotope Ratio Mass Spectrometry: IRMS) 를 사용하였다.	이들 장군석회암 시료들에 대한 산소와 탄소 동위원소 분석 결과는 표 3과 같다. $\delta^{18}\text{O}$ 값은 9.3~20.1‰(vs. V-SMOW) 이며, $\delta^{13}\text{C}$ 값은 -6.5~0.8‰ (vs. VPDB)로 해양 기원의 석회암이 갖는 산소와 탄소 안정동위원소 조성과는 다른 범위의 값을 보여준다. 즉 $\delta^{18}\text{O}$ 값은 18~24‰ (vs. V-SMOW), $\delta^{13}\text{C}$ 값은 -1~1‰ (vs. V-PDB) 사이의 값을 갖는 것으로 알려진 섀ields and Veizer, 2002)에 비하여, 연구 지역 석회암의 산소와 탄소 동위원소 조성은 더 가볍고 넓은 범위의 $\delta^{18}\text{O}$ 값과 $\delta^{13}\text{C}$ 값을 가지는 차이점을 보여준다.	울진 왕피리 보암 리튬광상의 성인 (지질학회지 v50n4p489-500)	36.905833 129.211944
21	HSR03	저어콘 U-Pb 연대측정	고분해능이차이온질량 분석기(SHRIMP)	U-Pb 저어콘 연대측정은 SHRIMP-IIe/MC를 이용하여 수행되었으며 자세한 분석방법과 절차는 Williams (1998)를 따랐다. 동위원소분석을 위한 일차이온빔은 산소음이온(O_2^-)을 이용하였으며, 약 4 nA 세기와 30 μm 직경을 갖도록 조절하였다. 분석 시 U 농도를 측정하기 위하여 저어콘 표준시료인 SL13 ($^{206}\text{Pb}/^{238}\text{U} = 0.0928$, $\text{U} = 238$ ppm; Claoué-Long et al., 1995)을 사용하였고, U-Pb 동위원소 성분은 미국 미네소타주 둘루스복합체(Duluth Complex)에서 산출하는 FC1 ($^{206}\text{Pb}^*/^{238}\text{U} = 0.1859$, 1099 Ma; Paces and Miller, 1993)저어콘 표준시료를 함께 분석하여 보정에 이용하였다. 초기자료의 보정과 연대계산 및 다이어그램 작성은 Squid 2.50와 Isoplot 3.71 프로그램(Ludwig, 2008, 2009)을 사용하여 처리하였다. U-Pb 동위원소 분석 결과는 표 2에 1σ 의 분석오차로 보고하였다. SHRIMP U-Pb 분석이 이루어진 저어콘의 연대 중 1,200 Ma보다 오래된 경우는 ^{204}Pb 에 대해 보정한 $^{207}\text{Pb}/^{206}\text{Pb}$ 연대를, 1,200 Ma보다 젊은 경우는 ^{207}Pb 에 대해 보정한 $^{206}\text{Pb}/^{238}\text{U}$ 연대를 선택하였다. 계산된 연대에 딸린 오차범위는 95% 신뢰수		경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대 (지질학회지 v55n2p191-205)	37.437222 126.622778

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
22	HSR03	저어콘 내부구조 확인	JEOL JSM-6610LV 주사전자현미경	JEOL JSM-6610LV 주사전자현미경(SEM, scanning electron microscope)을 이용하여 음극선발광(CL, cathodoluminescence) 및 후방산란전자(BSE, back-scattered electron) 영상을 촬영하여 저어콘 내부 구조를 확인하고,	HSR03 시료에서 분리한 저어콘은 투명하며 열은갈색에서 다갈색을 보여 외형적인 특징이 HSR04 저어콘과 유사하고 약 90-220 μm 범위의 장축을 가지며, 자형 내지 반자형의 결정형을 띠고 있다. 음극선발광 영상에서 관찰한 결과 대체로 저어콘들은 상속핵을 포함하고 있다. 상속핵에서는 진동누대 내지는 부분누대구조가 나타난다(그림 4b). 일부 입자들은 기존의 진동누대를 절단하며 발달하고 있다(그림 4b). 상속핵의 외연부에는 변성기원 저어콘에서 흔히 나타나는 밝고 좁은 음극선발광 영상영역이 나타나며 기존의 누대구조와 부조화적으로 과성장한 어두운 조직을 관	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대 (지질학회지 v55n2p191-205)	37.437222 126.622778
23	HSR04	저어콘 내부구조 확인	JEOL JSM-6610LV 주사전자현미경	JEOL JSM-6610LV 주사전자현미경(SEM, scanning electron microscope)을 이용하여 음극선발광(CL, cathodoluminescence) 및 후방산란전자(BSE, back-scattered electron) 영상을 촬영하여 저어콘 내부 구조를 확인하고,	HSR04 시료에서 분리한 저어콘은 투명하며 열은 갈색에서 다갈색을 보이고 약 100-300 μm 범위의 장축을 가진다. 음극선발광영상에서 진동누대(oscillatory zoning) 또는 부분누대(sector zoning)가 발달한 상속핵(inherited core)들이 관찰되며, 외연부에 밝고 좁은 음극선발광영상영역 및 어두운 과성장(overgrowth)영역이	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대 (지질학회지 v55n2p191-205)	37.437222 126.622778
24	적색이암	후방산란전자영상(BEI)	유종인 Jeol사의 JSM-7610F 모델의 전계방사형 주사전자현미경(FE-SEM)과 X-선 에너지 분광기(EDS)	가속전압 15 kV, 가속전류 1 nA, 초점거리 15 mm 조건에서 영상관찰을 하였으며, 고배율(×10,000 이상) 영상촬영 시에는 가속전압 10 kV, 가속전류 0.5 nA, 초점거리 4.5 mm 조건에서 관찰	후방산란전자영상(BEI)에서 자색 이암은 석영 및 흑운모의 결정형태가 관찰되는 반면, 자색 광맥은 반정이 나타나지 않고 균질해 보인다(그림 6a, 6b). 현무암은 주로 사장석과 감람석 반정 그리고 사장석 래스 기질로 이루어져 있다. 사장석은 뚜렷한 광물의 형태 및 가장자리를 보이나, 그 내부는 부분적으로는미정질의 점토광물로 치환되어 있으며 그 결과 전반적으로 변질을 심하게 받은 상태이다(그림 6c, 6d).	청송 유네스코 세계지질공원 내 주방천 페퍼라이트의 재고찰: 수압파쇄에 의해 형성된 유사 페퍼라이트 (지질학회지 v54n3p257-268)	36.560000 129.130000
25	적색이암	X-선 회절분석	Bruker사의 D8 Advance A25	획득된 X-선 회절 자료는 EVA V3.1 (정성분석) 프로그램을 이용하여 광물 조성분석을 하였다. 분석 조건은 니켈 필터를 이용한 구리 파장의 X-선을 이용하여 40 kV, 40mA, 4~90° 2-theta 구간에서 0.02도/57.3초로 분석을 실시	X-선 회절분석 결과, 자색 이암(Cs1A, Cs1B)과 현무암 내 자색 광맥(Cs04-2, Cs37-1, Cs03-L)은 공통적으로 석영, 스멕타이트-일라이트 혼합층, 적철석 등의 광물들로 구성되어 있으나, 자색 이암에만 사장석과 비교적 결정도가 높은 일라이트가 포함되어 있다 (그림 7).	청송 유네스코 세계지질공원 내 주방천 페퍼라이트의 재고찰: 수압파쇄에 의해 형성된 유사 페퍼라이트 (지질학회지 v54n3p257-268)	36.560000 129.130000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
26	무등산응회암	무등산응회암 주성분원소 분석결과	X-선 형광분석기(X-ray fluorescence;MXF-2399) (한국지질자원연구원)	시료를 비드(bead)로 제작한 후에 전류 70 mA, 전압 39 kV하에서 X-선을 조사하여 수행되었다	무등산응회암의 주성분원소 분석 결과는 Table 1과 같다. 천왕봉 지역무등산응회암은 안양산 지역 무등산응회암보다 SiO2함량이 상대적으로 높다. 이는 천왕봉 지역 무등산응회암이 안양산 지역 무등산응회암에 비해 분화가 진행된 마그마에서 기원했음을 암시한다(Fig. 5). 주성분원소 분석결과 천왕봉과 안양산 지역 무등산응회암은 동원마그마 기원이고, 두 지역 모두 고도에 따른 무등산응회암내 주성분원소 변화는 크지 않지만천왕봉 지역 무등산응회암을 형성한 마그마가 안양산지역 무등산응회암을 형성한 마그마에 비해 더 분화된 양상을 보	천왕봉과 안양산을 중심으로 한 무등산응회암의 암석학적 연구 (암석학회지 v23n4p325-336)	35.130489 126.994298; 35.130489 127.020487; 35.102887 127.020487; 35.102887 126.994298
27	무등산응회암	무등산응회암 미량원소 분석	ICP-AES(Inductively Coupled Plasma Atomic Emission Spectroscopy), ICP-MS (Inductively Coupled Plasma-Mass Spectroscopy) 한 국기초과학지원연구원 오창센터에서 분석	높은 농도의 미량원소는 ICP-AES(InductivelyCoupled Plasma Atomic Emission Spectroscopy)로, 낮은 농도의 미량원소들은 ICP-MS (InductivelyCoupled Plasma-Mass Spectroscopy)를 이용하여 한국기초과학지원연구원 오창센터에서 분석하였다	무등산응회암의 미량원소 분석 결과는 Table 2와 같다.미량원소는 다소 분산되었으나 천왕봉과 안양산 지역 무등산응회암이 모두 유사한 패턴을 보인다(Fig. 7).	천왕봉과 안양산을 중심으로 한 무등산응회암의 암석학적 연구 (암석학회지 v23n4p325-336)	35.130489 126.994298; 35.130489 127.020487; 35.102887 127.020487; 35.102887 126.994298
28	무등산응회암	광물화학조성	EPMA(Elec-tron Probe X-ray Microanalyzer;JXA-8100)을 사용 (광물화학 조성은 경상대학교 공동 실험실습관)	가속 전압 15 kV, 조사전류 10 nA, 빔 직경 5 μm이고 분석시간은 원소 당 20초 이다.	무등산응회암의 대표적인 반정광물인 사장석과 휘석에 대하여 EPMA를 이용한 광물 성분분석을 실시하였다(Table 3) 천왕봉 지역 무등산응회암에서는 단사휘석인 보통휘석(augite)만이 산출되나, 안양산 지역 무등산응회암에서는 보통휘석 이외에도 소량이지만 고도 850 m 시료에서 사방휘석인 엔스테타이트(enstatite)가 발견되기도 한다(Fig. 9b). 보통휘석의 조성은 천왕봉 지역에서 Wo43.8-44.2En40.9-42.4Fs13.8-15.2이며, 안양산 지역에서 Wo43.7-44.0En40.8-42.8Fs13.2-15.9이다. 두 지역의 보통휘석 성분은 매우 유사하다. 안양산 지역에서 발견되는 엔스테타이트 성분은 Wo2.1En64.8Fs33.6이다(Table	천왕봉과 안양산을 중심으로 한 무등산응회암의 암석학적 연구 (암석학회지 v23n4p325-336)	35.130489 126.994298; 35.130489 127.020487; 35.102887 127.020487; 35.102887 126.994298

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
29	암석에 함유된 각섬석의 성분	조암광물에 대한 화학적 특성을 밝히기 위한 분석	전자현미분석기(JXA-8100)	정량분석 조건으로 가속전압 15 kv, 가속전류 10 nA, 전자빔 직경은 5 μm이다	Table 2는 암석에 함유된 각섬석의 성분을 나타낸 것으로 NaB+CaB에 대한 NaB의 함량에 따라 크게 4 group으로 분류가 된다. 연구지역의 각섬석은 모두 칼슘 각섬석(calcic amphibole) 그룹에 도식되며, 국제광물학협회(IMA; Leake et al, 1997)의 각섬석 분류를 따르면 다음과 같이 나누어진다. CaB≥1.5.;(Na+K)A<0.5; CaA<0.50인 조건을 만족하는 화강암의 각섬석은 마그네시오 각섬석(magnesian-hornblende)에 도식되며, 섬장암의 각섬석들은 CaB≥1.5.; (Na+K)A≥0.5; Ti<0.50인 조건을 충족하여 페로 에데나이트(ferroedenite)의 영역에 도식된다(Fig. 5). Mg/(Mg+Fe)의 비는 섬장암에서는	경남 산청 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v24n1p25-54)	35.533334 127.833334; 35.533334 128.083333; 35.383340 128.083333; 35.383340 127.833334
30	암석에 함유된 흑운모의 성분	조암광물에 대한 화학적 특성을 밝히기 위한 분석	전자현미분석기(JXA-8101)	정량분석 조건으로 가속전압 15 kv, 가속전류 10 nA, 전자빔 직경은 6 μm이다	흑운모의 성분을 나타낸 것이다.	경남 산청 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v24n1p25-54)	35.533334 127.833334; 35.533334 128.083333; 35.383340 128.083333; 35.383340 127.833334
31	암석에 함유된 휘석의 성분	조암광물에 대한 화학적 특성을 밝히기 위한 분석	전자현미분석기(JXA-8102)	정량분석 조건으로 가속전압 15 kv, 가속전류 10 nA, 전자빔 직경은 7 μm이다	휘석의 성분을 나타낸 것이다.	경남 산청 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v24n1p25-54)	35.533334 127.833334; 35.533334 128.083333; 35.383340 128.083333; 35.383340 127.833334
32	암석에 함유된 장석의 성분	조암광물에 대한 화학적 특성을 밝히기 위한 분석	전자현미분석기(JXA-8103)	정량분석 조건으로 가속전압 15 kv, 가속전류 10 nA, 전자빔 직경은 8 μm이다	장석의 성분을 나타낸 것이다.	경남 산청 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v24n1p25-54)	35.533334 127.833334; 35.533334 128.083333; 35.383340 128.083333; 35.383340 127.833334
33	화성암류의 주성분원소 분석	주성분원소	X-선형광분광분석기(SHIMADZU XRF-1700)	전류 70 nA,전압 40 kV 조건에서 분석	연구지역에 분포하는 화성암류의 지화학적 특성을 알아보기위하여 주성분분석	경남 산청 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v24n1p25-54)	35.533334 127.833334; 35.533334 128.083333; 35.383340 128.083333; 35.383340 127.833334
34	화성암류의 미량원소 및 희토류원소	미량원소 및 희토류원소	원자방출분광분석기(ICP-AES)와 유도결합플라즈마 질량분석기(ICP-MS)	미량원소 및 희토류 원소 분석	연구지역에 분포하는 화성암류의 지화학적 특성을 알아보기위하여 미량원소 분석	경남 산청 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v24n1p25-54)	35.533334 127.833334; 35.533334 128.083333; 35.383340 128.083333; 35.383340 127.833334
35	AMS data in the Quaternary faults, SE Korea	AMS data in the Quaternary faults, SE Korea	체코AGICO사의 Kappabridge KLY-4S (정밀도: 2×10 ⁻⁸ [SI], 정확도: 0.3 %)와 CS-3 apparatus를 사용	외부자기장은 모두300 Am ⁻¹ 이다.	모든 시편들의 대자율이방성이 측정되었으며, 각 지점별로 대표시편을 선발하여 자성광물동정을 위한 고온대자율 실험을 실시하였다	한반도 남동부 제4기 단층의 대자율이방성(AMS): 단층의 운동감각과 고응력장 해석 (암석학회지 v23n2p75-103)	35.782997 129.331817

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36	구룡층군의 흑운모 편암	SHRIMP U-Pb 분석	SHRIMP	SHRIMP 분석의 절차와 자료 처리는 대부분 Willams(1998)의 방법을 따랐다. 연대측정에 필요한 원소 및 분자에 대해 5회를 스캔하여 측정하였으며, 이온빔의 직경은 약 25 μm 이었다. 보정을 위해 미지시료의 3~4점 분석마다 FC1 표준 저어콘을 측정하였다. 초기자료의 보정, 연대계산과 다아아그램의 작성은 SQUID 2.50과 Isoplot 3.71(Ludwig, 2008, 2009)프로그램에 의하였으며, common Pb 보정은 204Pb카운트 측정치를 이용하였다. 이 연구에서 논의하는 각 분석점의 연령은 1.0 Ga을 기준으로 이보다 젊을 경우는 207Pb 보정의 206Pb/238U 비, 고기인 경우는 204Pb 보정의 207Pb/206Pb 비에 각각 의한 것이다. 개별 분석치에 딸린 오차는 1 σ 수준이며, 가중평균연령계산치의 오차는 95% 신뢰 수준이다.	55개 저어콘 입자로부터 연변부 3점과 쇠설성 핵53점의 SHRIMP U-Pb 분석치를 얻었다. 연변부 저어콘의 분석치에서 U과 Th 함량은 각각 49~111 ppm과 1 ppm 미만이고, 결과적으로 Th/U 비는 0.01 미만으로 매우 낮다(Table 1, Fig. 4). 이들의 겉보기연령(apparent age)은 244.4~250.0 Ma의 범위이고, 가중평균연령은 246.8 \pm 5.8 Ma이다(n=3, MSWD=0.38). 쇠설성 저어콘 핵의 분석치는 U 및 Th 함량과 Th/U 비가 각각 40~3153 ppm, 24~356 ppm과 0.03~1.38로 넓은 범위를 보여 이들 저어콘이 다양한 성분의 모암으로부터 유래하였음을 시사한다. 이들의 겉보기연령은 대본기 후기에서 사생대 최후기에 이르는 360.8~2519 Ma에 걸쳐있다(Table 1, Fig. 5, 6). 이들은 콘코디아 다이어그램과 빈도막대그래프/확률밀도그림에서 가중평균연령 378 \pm 10 Ma(n=9, MSWD=6.2), 420 \pm 4 Ma(n=6, MSWD=0.30), 940 \pm 61 Ma(n=4, MSWD=0.59), 1845 \pm 9 Ma(n=18, MSWD=2.3), 2506 \pm 18 Ma(n=2, MSWD=0.59)인 집중군을 형성하며, 약 687 Ma와 725 Ma의 신원생대 후기 연령	경기육과 동부 오대산 지역의 구룡층군에 대한 SHRIMP U-Pb 저어콘 연대측정 : 새로운 후기 고생대층의 인지와 지체구조적 의의 (암석학회지 v23n3p197-208)	37.896546 128.561372
37	석회암	SHRIMP U-Pb	SHRIMP	저어콘 분리는 Cheong et al.(2013)의 방법에 따라 시료를 파쇄 및 분쇄하여 240 μm 이하로 분말화한 후, 약 10°정도 기울인 선광판에 200~300 g의 분말 시료를 넣고 물을 흘려보냈다. 약 30분 정도 후 선광판가장자리에 남은 시료를 회수하고 자석을 이용하여 자성광물을 제거하였다. 마지막으로 실험미경하에서 깨끗한 저어콘을 선별하였다(hand-picking)	결론적으로, YM-14 이질암의 근원암 대부분은 고원생대 후기인 Statherian 초기(1.8 Ga)의 화성암이며, 그밖에 같은 시기의 변성암과 고원생대 초기(Siderian), 대본기 중기(390 Ma), 전기 석탄기 (Serpukhobian, 322 Ma)의 화성암이 근원암으로 소량 유입된 것으로 해석된다 (Cohen et al., 2013). 일반적으로 가장 젊은 저어콘의 연대가 퇴적물의 퇴적시기 하한을 반영하는 것으로 이해하고 있다 (Fedo et al., 2003). 영암지역 저변성이질암의 가장 젊은 저어콘 U-Pb 가중평균연령이 322 Ma로 전기석탄기의 Serpukhobian에 해당된다. 그러므로, 연구지역의 저변성이질암은 전기 석탄기 이후부터 퇴적되기 시작한 것으로 해석되며, 후기 석탄기 이후에 형성된 지층임을 지	옥천대 남서부 지역 저변성이질암의 SHRIMP U-Pb 저어콘 연대와 층서적 의미 (암석학회지 v24n1p55-63)	34.687450 126.705180
38	심성암류	XRF 분석	SHIMADZU XRF-1700	연구지역에 분포하는 심성암류의 지화학적 특성을 알아보기 위하여 시료를 선정하여 주성분과 미량성분에 대하여 화학분석을 행하였다. 주성분 원소는 부경대학교 공동실험실습관에서 X-선형광분광분석기(SHIMADZU XRF-1700)를 이용하여, 전류 70 nA, 전압 40 kV 조건에서 분석하였다.	연구지역의 장석은 맨거라이트, 섬장암, 조립질섬장암의 알칼리장석, 퍼사이트 조직의 성분, 사장석과 사장석의 중심부에서 가장자리의 성분 등을 분석하였다.	경남 합천 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v26n1p13-43)	35.583333 128.000000; 35.583333 128.416667; 35.500000 128.416667; 35.500000 128.000000

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39	중생대 심성암체	모드 분석	편광현미경	현미경관찰을 통한 모드분석	합천지역 중생대 심성암체들의 정확한 암석학적 분류를 위하여, 현미경관찰을 통한 모드분석을 실시하였다.	경남 합천 지역의 섬장암에 관한 암석학적 연구 (암석학회지 v26n1p13-43)	35.583333 128.000000; 35.583333 128.416667; 35.500000 128.416667; 35.500000 128.000000
40	백운암	XRD 분석	SHIMADZU사의 LabX XRD-6000 기기	CuKα선과 Ni필터에 의한 X-선으로 가속 전압40 kV, 주사 속도 1°2θ/min, 시정수 1 sec, 슬릿1°~0.3 mm~1°의 조건으로 측정하였다	웅도 백운암 내의 석면 광물을 확인하기 위한 X-선회절분석 결과, U1~U4 지역 모두 양기석과 투각섬석이 함유되어 있으며, 그 외 백운석, 휘석, 활석, 석영 등을 포함하고 있었다(Table 2). 양기석-투각섬석의 회절선(2θ)은 10.55°, 28.59°, 33.03°에서 나타났는데, 양기석과 투각섬석은 SiO4 사면체들이 산소를 공유하면서 복쇄형(Si4O116-) 체인을 이루는 구조를 가진 완전한 고용체로서, 팔면체 자리에 Mg가 90% 이상이면 투각섬석(Ca2Mg5Si8O22(OH)2), 90% 이하이면 양기석(Ca2Fe5Si8O22(OH)2)으로 명명한다. 이로 인해서 X-선회절분석으로 양기석과 투각섬석을 각각 구별하는 것은 쉽지 않다. 회절선 20.85°, 26.65°, 50.14°에서 석영의 피크와 9.45°, 19.32°, 60.46°에서 활석의 피크가 확인되었다. 또한 30.99°, 41.17°, 51.13°에서 백운석피크도 관찰되었다(Fig. 5). U1, U2, U4의 경우 구성 광물인 양기석-투각섬석, 백운석, 휘석, 활석, 석영들의 유사한 피크값과 강도를 보여 주지만, U3의 경우 구성광물 중 특히 양기석-투각섬석과 휘석의 피크 강도가 높은 값을 가졌다	서산 웅도 백운암 내 석면 산출 및 광물학적 특성 규명 (자원환경지질학회지 v47n5p489-496)	36.917636 126.373291
41	백운암	광학적 분석	Nikon사의모델 ECLIPSE LV100N POL 편광현미경	핸드밀을 이용하여 100 μm 이하로 분쇄하고, 75 μm 크기의 체에 체가름하였다. 체가름한 시료는 특정한 굴절용액과 편광현미경(ATMICROSCOPE, PS300)을 사용하여 광물의 형태, 분산염색의 색상, 복굴절, 소광각, 신장부호를 확인하여 석면 여부 및 종류를 규명하였다(Perkins andHarvey, 1993).	웅도 백운암에 대해 특정의 굴절액에 침액하여 편광현미경으로 광물의 형태를 조사하기 위해 굴절율1.605로 확인한 결과, 각섬석류 석면은 주황색이 청색으로 변화하였으며, U1, U2와 U4의 시료에서는 비석면형(non-asbestiform) 각섬석류가 확인되고, U3시료에서석면형(asbestiform) 각섬석류가 확인되었다(Table 2)	서산 웅도 백운암 내 석면 산출 및 광물학적 특성 규명 (자원환경지질학회지 v47n5p489-496)	36.917636 126.373291

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
42	백운암	주사현미분석	SUPRA 25 FE-SEM 주사전자현미경	모암시료를 핸드밀로 100 μm이하로 분쇄하여, 가속전압 20 kV, 10~15 nA의 측정조건에서 관찰하였으며, 에너지 분산 분광장치(Energy Dispersive X-ray Spectrometer, EDS)를 이용하여 정성분석을 실시하였다	전자현미경의 EDS를 이용한 분석 결과, Si, Mg,Ca, Fe으로 구성된 양기석-투각섬석 광물들이며, 전자현미경으로 관찰한 결과, 양기석-투각섬석은 섬유상(fibrous), 침상(acicular), 주상(columnar)과 같은 매우 다양한 입자 형태로 산출되었다. 용도 백운암 U1 시료는 주상의 각섬석 입자가 벽개를 따라 더 작은 침상또는 주상 입자로 쪼개지는 특성을 나타내며 쪼개진입자들이 석면입자를 형성할 수 있을 것으로 판단되었다(Fig. 6(A)). U2와 U4 시료는 평행하게 배열된 침상및 주상의 입자들이 주로 관찰되었으며, 섬유상 입자들은 거의 관찰되지 않았다(Fig. 6(B)와 Fig. 6(D)).U3 시료에서 발견된 석면입자는 너비 1 μm 이하이고 길이가 수십 μm 이상인 휘어진 형태의 전형적인 석면의 섬유상을 나타낸다(Fig. 6(C)). 전자현미경 분석결과백운암 시료의 석면입자 분석 결과는 PLM 분석결과와 거의 일치하는 것으로 나타났다(Table 2의	서산 용도 백운암 내 석면 산출 및 광물학적 특성 규명 (자원환경지질학회지 v47n5p489-496)	36.917636 126.373291
43	사암시료	퇴적층의 퇴적시기 SHRIMP 연대측정	한국기초과학지원연구원(KBSI) 오창센터에 설치되어 있는 SHRIMP II를 사용	분석방법과 절차는 Williams and Claesson(1987), Williams(1998), Kim et al.(2006a, b)에 의해 기재되어 있으며, U과 Th의 붕괴상수는 Steiger and Jger(1977)의 값을 사용하였다. 표와 그림들에 실린 분석점 자료와 일치연령에 표시된 오차범위는 1σ를 나타내고 평균 연령치에 딸린 오차범위는 2σ(약 95% 신뢰도)를 정의한다. 분석점 직경은 25 μm이며 한 점의 U-Pb 분석마다 필요한 모든 질량의 동위원소를 5번 반복 정량하였다. 저어콘 동위원소 자료들은 SQUID(Ludwig, 2001a)와Isoplot(Ludwig, 2001b) 프로그램을 사용해 처리하였다(Oh et al., 2006).	문암동층의 중부구간 MU 1시료에 대한 SHRIMP-U-Pb 저어콘 연대 측정에서 채설성 저어콘으로부터 일치연령에 가까운 41점의 분석치를 얻었으며, 이들에서 얻은 24점의 고원생대 연령 분석치의 가중평균 연령은1890±11 Ma이다(이하 95%신뢰도, MSWD=3.5) (Figs. 13, 14). 이는 경기육괴 지질연대 연구의 기존자료와 잘 부합하는 분석치로 울진지역 기반암의 지질연대를 지시한다. 한편, 문암동층의 중부구간 MU 2시료에 대한 SHRIMP U-Pb 저어콘 연대 측정에서 채설성 저어콘으로부터 일치연령에 가까운 32점의 분석치를 얻었으며, 이들에서 얻은 7점의 현생이연 연령 분석치의 가중평균 연령은 229.8±2.5 Ma이다 (이하 95%신뢰도, MSWD=1.17) (Table 1). 이 연대값은 사암의퇴적물 입자의 연대로서 퇴적시기 자체가 아닌 퇴적작용의 최고연대를 지시한다. 즉, 229.8±2.5 Ma 연대의저어콘을 포함하는 MU 2 사암시료의 퇴적작용이 최소한 229.8±2.5 Ma 이후에 발생하였다는 것을 의미한다. 이로부터 문암동층 퇴적시기의 최고연대를 트라이아스기 후기(229.8±2.5 Ma)로 제한할 수 있다. 한편, CL사진을 관찰하여 저어콘 입자들의 형태와내부조직에 관한 정보를 얻었다. 고원생대의 저어콘 입자들은 원마도가	경기육괴 북동부에 분포하는 중생대 문암동층의 퇴적학적 연구 (자원환경지질학회지 v47n5p517-532)	38.025733 128.030677; 38.025733 128.813456; 37.566709 128.813456; 37.566709 128.030677

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
44	사암시료	퇴적층의 퇴적시기 SHRIMP 연대측정	한국기초과학지원연구원(KBSI) 오창센터에 설치되어 있는 SHRIMP II를 사용	분석방법과 절차는 Williams and Claesson(1987), Williams(1998), Kim et al.(2006a, b)에 의해 기재되어 있으며, U과 Th의 붕괴상수는 Steiger and Jger(1977)의 값을 사용하였다. 표와 그림들에 실린 분석점 자료와 일치연령에 표시된 오차범위는 1σ를 나타내고 평균 연령치에 딸린 오차범위는 2σ(약 95% 신뢰도)를 정의한다. 분석점 직경은 25 μm이며 한 점의 U-Pb 분석마다 필요한 모든 질량의 동위원소를 5번 반복 정량하였다. 저어콘 동위원소 자료들은 SQUID(Ludwig, 2001a)와Isoplot(Ludwig, 2001b) 프로그램을 사용해 처리하였다(Oh et al., 2006).	문암동층의 중부구간 MU 1시료에 대한 SHRIMP-U-Pb 저어콘 연대 측정에서 채설성 저어콘으로부터 일치연령에 가까운 41점의 분석치를 얻었으며, 이들에게 얻은 24점의 고원생대 연령 분석치의 가중평균 연령은1890±11 Ma이다(이하 95%신뢰도, MSWD=3.5) (Figs. 13, 14). 이는 경기육괴 지질연대 연구의 기존자료와 잘 부합하는 분석치로 울전지역 기반암의 지질연대를 지시한다. 한편, 문암동층의 중부구간 MU 2시료에 대한 SHRIMP U-Pb 저어콘 연대 측정에서 채설성 저어콘으로부터 일치연령에 가까운 32점의 분석치를 얻었으며, 이들에게 얻은 7점의 현생이인 연령 분석치의 가중평균 연령은 229.8±2.5 Ma이다(이하 95%신뢰도, MSWD=1.17) (Table 1). 이 연대값은 사암의퇴적물 입자의 연대로서 퇴적시기 자체가 아닌 퇴적작용의 최고연대를 지시한다. 즉, 229.8±2.5 Ma 연대의저어콘을 포함하는 MU 2 사암시료의 퇴적작용이 최소한 229.8±2.5 Ma 이후에 발생하였다는 것을 의미한다. 이로부터 문암동층 퇴적시기의 최고연대를 트라이아스기 후기(229.8±2.5 Ma)로 제한할 수 있다. 한편, CL사진을 관찰하여 저어콘 입자들의 형태와내부조직에 관한 정보를 얻었다. 고원생대의 저어콘 입자들은 원마도가	경기육괴 북동부에 분포하는 중생대 문암동층의 퇴적학적 연구 (자원환경지질학회지 v47n5p517-532)	38.025733 128.030677; 38.025733 128.813456; 37.566709 128.813456; 37.566709 128.030677
45	안산암 시료	K-Ar 연대측정	SVMS 동위원소분석은 한국기초 과학지원연구원 오창센터의 연대측정팀에서 실시하였다.	실험에 관한 자세한 전처리 과정 및 실험 방법에 관한 내용은 김정민(2001)와 김종선 외(2005)를 참고하기 바란다	K-Ar 연대측정 결과는 203.7±3.9Ma로 측정되었다(Table 2).	경기육괴 북동부에 분포하는 중생대 문암동층의 퇴적학적 연구 (자원환경지질학회지 v47n5p517-532)	38.025733 128.030677; 38.025733 128.813456; 37.566709 128.813456; 37.566709 128.030677
46	안산암 시료	40Ar/39Ar 연대측정	기체 질량분석기	ISOPLLOT(Ludwig, 2001)프로그램을 이용하였다.	기저 안산암질 화산암의 플래토(plateau)연대는 정의되지 않았으나, 구간 평균값으로 227.4±8.4 Ma의 연대가 계산되었다(Table 3).	경기육괴 북동부에 분포하는 중생대 문암동층의 퇴적학적 연구 (자원환경지질학회지 v47n5p517-532)	38.025733 128.030677; 38.025733 128.813456; 37.566709 128.813456; 37.566709 128.030677
47		흑요암XRD 분석	은 한국지질자원연구원 지질자원분석센터의 X-선 회절분석(X-raydiffraction(XRD), Philip X'Pert MPD)을 이용하여 수행	회절 패턴은 Cu target(CuKα: 40 kV, 30 mA) 을 이용하여 3-65° 2θ 구간에서 0.01° 스텝 하에서, 스텝당 0.25초 간격으로 획득하였다. 배경치를 포함한 전체패턴을 대상으로 Siroquant 프로그램 v3.0을 이용 하여 광물함량과 비정질의 양을 계산하였다.	XRD분석 결과, 흑요암의 흑색 유리질 입자는 대부분비정질로 되어 있으나 새니딘, 아노소클레이스, 투휘석,흑운모, 자철석 등을 소량 포함하고 있다(Table 1, Fig. 5).이 같은 결과는 현미경 관찰에서 나타난 광물조성과도 잘 일치한다. 특히 20-30 °2θ 부근에서 나타나는 높은배경치는 흑요암의 유리질에 비정질이 상당히 포함되어 있음을 지시한다. 점토광물과 같은 함수성 이차 변질광물은 확인되지 않는다.	울릉도 곰바위용결응회암 내 흑요암의 산출특징과 성인 (자원환경지질학회지 v50n2p105-116)	37.481793 130.810324

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
48		흑요암XRD 분석	은 한국지질자원연구원 지질자원분석센터의 X-선 회절분석(X-raydiffraction(XRD), Philip X'Pert MPD)을 이용하여 수행	회절 패턴은 Cu target(CuKα: 40 kV, 30 mA) 을 이용하여 3-65° 2θ 구간에서 0.01° 스텝 하에서, 스텝 당 0.25초 간격으로 획득하였다. 배경치를 포함한 전체패턴을 대상으로 Siroquant 프로그램 v3.0을 이용 하여 광물함량과 비정질의 양을 계산하였다.	XRD분석 결과, 흑요암의 흑색 유리질 입자는 대부분비정질로 되어 있으나 새니딘, 아노소클레이스, 투휘석,흑운모, 자철석 등을 소량 포함하고 있다(Table 1, Fig. 5).이 같은 결과는 현미경 관찰에서 나타난 광물조성과도 잘 일치한다. 특히 20-30 °2θ 부근에서 나타나는 높은배경치는 흑요암의 유리질에 비정질이 상당히 포함되어 있음을 지시한다. 점토광물과 같은 함수성 이차 변질광물은 확인되지 않는다.	울릉도 공바위용결응회암 내 흑요암의 산출특징과 성인 (자원환경지질학회지 v50n2p105-116)	37.481793 130.810324
49		흑요암 조직관찰과 주성분원소 정량분석	경상대학교 공동실험실습관의 전자현미분석기 (electron probe X-raymicroanalyzer(EPMA)), JEOL JXA-8100)를 이용하여수행		EPMA 정량분석결과(Table 2), 흑요암의 기질부에 대한 SiO2 함량은 65.43-66.35 wt.%, Na2O+K2O 함량은 8.14-8.53 wt.%로 조면암질 특성을 보여준다. 석영은 전혀 관찰되지 않는데, 이는 XRD분석 결과와도 잘 일치한다. 울릉도의 화산암은 높은 알칼리 함량을 보이며 대부분 K계열의 분화경향 (K2O>Na2O)을 띠는데(Song et al., 1999), 본 흑요암에서도 K2O 함량이 Na2O 함량보다 높게 나타나 일반적인 울릉도 화산암류와 비슷한 경향을 보인다. Fe는 약 3 wt.% 내외로 포함되어 있다. EPMA X선 성분도에 따르면, 유리질에는 Si, Al, Ti, Fe, Mg, K 성분이 균질하게 분포하며, 함철광물과 티탄광물의 미세결정들이 광범위하게산재하고 있다(Fig. 7c).	울릉도 공바위용결응회암 내 흑요암의 산출특징과 성인 (자원환경지질학회지 v50n2p105-116)	37.481793 130.810324
50		흑요암 표면의 미세조직관찰과 EDS(energydispersive spectrometer)에 의한 반정량분석	흑요암 표면의 미세조직관찰과 EDS(energydispersive spectrometer)에 의한 반정량분석은 한국기초과학연구원 대구센터의 고분해능주사전자현미경(highresolution scanning electron microscope(HR-SEM),Hitachi S-4800)을 이용하여 수행		SEM 분석에서 흑요암의 파단면은 유리질 특유의 매끄러운 패각상을 보이며, 일부 시료는 용해공동이 발달하기도 한다(Fig. 8a). EDS 분석에 의하면 유리질부분은 Si, Al, Ti, Fe, Na, K가 확인되며, 이들 구성비는 EPMA 분석치와도 잘 일치한다. 일메나이트는자형의 포유물로 존재하며, 유리질의 기질이 이를 둘러싸는 양상을 보인다(Fig. 8b)	울릉도 공바위용결응회암 내 흑요암의 산출특징과 성인 (자원환경지질학회지 v50n2p105-116)	37.481793 130.810324

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
51		흑요암 유리질에 대한 분광학적 분석	경북대학교공동실험실 습관의 적외선분광기 (fourier transforminfrared(FT- IR) spectrometer, Perkin-Elmer Frontier) 를 이용	분해능 1 cm ⁻¹ , 파수(wave number)4000-400 cm ⁻¹ 범위 하에서 이루어졌다. 분석 전 시료는 분말로 제 작한 후, KBr과 혼합한 펠릿으로 제작하여 투과율 (transmittance)을 측정하였다	실리카와 관련된 수산기의 진동특성을 살 펴보면, 강하게 결합된 OH 수산기는 3580-3620 cm ⁻¹ , 그리고 흡착수는 3400- 3500 cm ⁻¹ 에서 비대칭 신축진동 (stretchingvibration, ν 1)이 나타난다. 이 는 실리카 표면에 흡착된물 분자나 실라 놀(silanol, Si-OH)의 O-H 신축진동에의한 것이다. 1610-1630 cm ⁻¹ 에서는 물 분자 의 자유수(free water)의 H-O-H에 의해서 굽힘 진동(bendingvibration, ν 2)이 나타 나는데, 이는 실리카의 기질에 포획된 물 분자나 실리카의 균열에 포획된 물 분자 의 굽힘진동에 의한 것이다(Aines and Rossman, 1984).한편, 1080 cm ⁻¹ 에서는 Si-O 신축진동, 900-1100 cm ⁻¹ 의 흡수 띠 는 Si-O-Si의 비대칭 신축진동인데, 이는 유리질의 SiO ₄ 사면체의 결합에 기인한다 (Fronde1, 1982;Madejova and Komadel,	울릉도 곰바위용결융회암 내 흑요암의 산 출특징과 성인 (자원환경지질학회지 v50n2p105-116)	37.481793 130.810324
52		백운석 광석의 지질 형성, 평균 품위 및 규모		통계자료 수집	우리나라 주요 백운석 광산에 대한 백운 석 광석의 지질 형성, 평균 품위 및 규모를 설명한 자료	국내 백운석 광석의 산상과 광물학적 특 성 (한국광물학회지 v26n2p87-99)	37.265078 127.567633; 37.265078 128.456106; 35.757717 128.456106; 35.757717 127.567633
53		주요 백운석 광산의 발생에 따른 광물 조성		통계자료 수집	우리나라 주요 백운석 광산의 발생에 따 른 광물 조성 자료	국내 백운석 광석의 산상과 광물학적 특 성 (한국광물학회지 v26n2p87-99)	37.265078 127.567633; 37.265078 128.456106; 35.757717 128.456106; 35.757717 127.567633
54		구형 전기석 nodule의 대표적인 전자 현미경 분석	EPMA /Shimadzu 1600	EPMA (Shimadzu 1600)이용하여 BSE 사진촬영 및 광물정량분석	구형전기석의 EPMA 분석결과	대구 대덕산 규장암체에서 산출되는 전기 석에 대한 광물화학적 연구 (한국광물학 회지 v27n2p85-95)	35.770000 128.496944
55		구형 전기석 nodule의 대표적인 전자 현미경 분석	EPMA /Shimadzu 1600	EPMA (Shimadzu 1600)이용하여 BSE 사진촬영 및 광물정량분석	구형전기석의 EPMA 분석결과	대구 대덕산 규장암체에서 산출되는 전기 석에 대한 광물화학적 연구 (한국광물학 회지 v27n2p85-95)	35.770000 128.496944
56		방사형 전기석 nodule의 대표적인 전자 현미경 분석	EPMA /Shimadzu 1600	EPMA (Shimadzu 1601)이용하여 BSE 사진촬영 및 광물정량분석	방사형 전기석의 EPMA 분석결과	대구 대덕산 규장암체에서 산출되는 전기 석에 대한 광물화학적 연구 (한국광물학 회지 v27n2p85-95)	35.770000 128.496944
57		방사형 전기석 nodule의 대표적인 전자 현미경 분석	EPMA /Shimadzu 1600	EPMA (Shimadzu 1601)이용하여 BSE 사진촬영 및 광물정량분석	방사형 전기석의 EPMA 분석결과	대구 대덕산 규장암체에서 산출되는 전기 석에 대한 광물화학적 연구 (한국광물학 회지 v27n2p85-95)	35.770000 128.496944
58		정각산층 석회암의 주요성분	EPMA / JXA-8100	분석조건은 가속전압 15 kV, 전류 1.0-E08 A, 빔직경 10 μ m이다	정각산층 석회암의 주요성분 분석 결과	밀양 단장면 일대에 발달하는 아연-연 광 화대의 산출특성 (한국광물학회지 v28n3p279-292)	35.547222 128.903056
59		연구지역 Clinopyroxene의 대표적인 EPMA 분석	EPMA / JXA-8100	분석조건은 가속전압 15 kV, 전류 1.0-E08 A, 빔직경 11 μ m이다	Clinopyroxene의 대표적인 EPMA 분석 결 과	밀양 단장면 일대에 발달하는 아연-연 광 화대의 산출특성 (한국광물학회지 v28n3p279-292)	35.547222 128.903056
60		Garnet의 대표적인 EPMA 분석	EPMA / JXA-8100	분석조건은 가속전압 15 kV, 전류 1.0-E08 A, 빔직경 12 μ m이다	Garnet의 대표적인 EPMA 분석 결과	밀양 단장면 일대에 발달하는 아연-연 광 화대의 산출특성 (한국광물학회지 v28n3p279-292)	35.547222 128.903056

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61		Sphalerite의 대표적인 EPMA 분석	EPMA / JXA-8100	분석조건은 가속전압 15 kV, 전류 1.0-E08 A, 빔직경 13 µm이다.	Sphalerite의 대표적인 EPMA 분석결과	밀양 단장면 일대에 발달하는 아연-연 광화대의 산출특성 (한국광물학회지 v28n3p279-292)	35.547222 128.903056
62		만장광상 서부광체의 pyroxene EPMA 분석	EPMA / JXA-8100	분석조건은 가속 전압 15 keV, 전류 20 nA, 전자선 지름 1 µm이다.	분석지점별 / stage 별 만장광상 서부광체의 pyroxene EPMA 분석 결과	만장광상 서부광체의 철스카르화 작용 및 생성환경 (한국광물학회지 v31n4p307-323)	36.796906 127.967842
63		만장광상 서부광체의 pyroxene EPMA 분석	EPMA / JXA-8100	분석조건은 가속 전압 15 keV, 전류 20 nA, 전자선 지름 1 µm이다.	분석지점별 / stage 별 만장광상 서부광체의 pyroxene EPMA 분석 결과	만장광상 서부광체의 철스카르화 작용 및 생성환경 (한국광물학회지 v31n4p307-323)	36.796906 127.967842
64		만장광상 서부광체의 pyroxene EPMA 분석	EPMA / JXA-8100	분석조건은 가속 전압 15 keV, 전류 20 nA, 전자선 지름 1 µm이다.	분석지점별 / stage 별 만장광상 서부광체의 pyroxene EPMA 분석 결과	만장광상 서부광체의 철스카르화 작용 및 생성환경 (한국광물학회지 v31n4p307-323)	36.796906 127.967842
65		만장광상 서부광체의 pyroxene EPMA 분석	EPMA / JXA-8100	분석조건은 가속 전압 15 keV, 전류 20 nA, 전자선 지름 1 µm이다.	분석지점별 / stage 별 만장광상 서부광체의 pyroxene EPMA 분석 결과	만장광상 서부광체의 철스카르화 작용 및 생성환경 (한국광물학회지 v31n4p307-323)	36.796906 127.967842
66		plagioclase, muscovite and chlorite의 성분 분석	EPMA /Shimadzu 1600	분석 조건은 가압전압은 15 kv, 빔(beam) 직경은 3 µm, 빔 전류는 20 nA이다. 기질효과 보정은 ZAF 방법을 사용하였다.	plagioclase, muscovite and chlorite의 성분 분석	무주 왕정리 일대 구상 화강편마암의 성인과 형성시기 (암석학회지 v21n3p287-307)	36.030000 127.688611
67		구상 화강편마암 및 흑운모, 복운모, 전기석포함 우백질 화강암의 전암 조성	EPMA /Shimadzu 1600	분석 조건은 가압전압은 15 kv, 빔(beam) 직경은 3 µm, 빔 전류는 20 nA이다. 기질효과 보정은 ZAF 방법을 사용하였다.	구상 화강편마암 및 흑운모, 복운모, 전기석포함 우백질 화강암의 전암 조성	무주 왕정리 일대 구상 화강편마암의 성인과 형성시기 (암석학회지 v21n3p287-307)	36.030000 127.688611
68		구상 화강편마암의 모나자이트 SHRIMP 연대	EPMA /Shimadzu 1600	분석 조건은 가압전압은 15 kv, 빔(beam) 직경은 3 µm, 빔 전류는 20 nA이다. 기질효과 보정은 ZAF 방법을 사용하였다.	구상 화강편마암의 모나자이트 SHRIMP 연대	무주 왕정리 일대 구상 화강편마암의 성인과 형성시기 (암석학회지 v21n3p287-307)	36.030000 127.688611
69		우백질 복운모 화강암의 지르콘 SHRIMP 연대	EPMA /Shimadzu 1600	분석 조건은 가압전압은 15 kv, 빔(beam) 직경은 3 µm, 빔 전류는 20 nA이다. 기질효과 보정은 ZAF 방법을 사용하였다.	우백질 복운모 화강암의 지르콘 SHRIMP 연대	무주 왕정리 일대 구상 화강편마암의 성인과 형성시기 (암석학회지 v21n3p287-307)	36.030000 127.688611
70		산청 방곡리 일대 Fe-Ti 광화대의 XRF분석결과	XRF	XRF 분석	산청 방곡리 일대 Fe-Ti 광화대의 XRF분석 결과	산청 철-티탄 광화대의 발달양상과 연성변형 (암석학회지 v22n2p209-217)	35.544778 127.753722
71		부산 장산지역의 구과상유문암의 전암성분분석과 CIPW 노움분석	XRD	XRD 분석	부산 장산지역의 구과상유문암의 전암성분분석과 CIPW 노움분석 결과	부산 장산 지역의 구과상(球狀) 유문암에 대한 암석학적 연구 (암석학회지 v22n3p219-233)	35.150278 129.222500
72		경상분지 구산동 응회암의 SHRIMP U-Pb Zircon 자료	SHRIMP Ile MC	이온빔의 직경은 25 µm이며, 분석절차는 Williams (1998)과 Ireland and Williams (2003)의 방법을 적용하였다. 분석에 사용한 저콘 표준물질은 FC-1과 SL-13이며, 측정 자료는 SQUID 2.5와 ISOPLOT 3.7 프로그램(Ludwig, 2008, 2009)을 이용하여 처리하	경상분지 구산동 응회암의 SHRIMP U-Pb 연대	백악기 경상분지 구산동응회암의 SHRIMP 저콘 연대 (암석학회지 v22n3p235-249)	35.874444 128.476667
73		덕적도 화강암의 모드분석		기존자료분석	덕적도 암상분석 결과	서부 경기육괴에 위치한 덕적도의 암상과 지질 (암석학회지 v22n4p263-272)	37.237778 126.125000
74		삼광금은광상 백운모 화학성분	EPMA /Shimadzu 1610	분석조건은 가속전압 15keV, 시료 전류 2.0×10-8 A, 전자선의 크기 5~10µm	삼광금은광상 백운모 화학성분 분석결과	삼광 금-은 광상의 엽리상 석영맥에서 산출되는 백색운모와 철백운석의 산상 및 화학조성 (광물과 암석 v33n1p53-64)	36.520833 126.865833
75		자연유리질 시료인 백두산 흑요석에 대한 EPMA 분석 결과	(FE-EPMA) JEOL JXA-8530F PLUS	가속전압 15kV와 빔 전류 10nA로 파장 분산 분광법(WDS)을 이용하여 분석	자연유리질 시료인 백두산 흑요석에 대한 EPMA 분석 결과	흑요암을 이용한 유리 지질 표준물질에 대한 예비 연구 (광물과 암석 v33n1p65-66)	41.994444 128.075000
76		백두산 흑요석 자연유리 시료에 대한 LA-ICP-MS 분석	레이저 삭마 유도결합 질량분석기(LA-ICP-MS)	분석은 빔 크기 50µm, 펄스 에너지 5mJ, 10Hz의 반복률의 조건으로 측정	백두산 흑요석 자연유리 시료에 대한 LA-ICP-MS 분석 결과	흑요암을 이용한 유리 지질 표준물질에 대한 예비 연구 (광물과 암석 v33n1p65-66)	41.994444 128.075000
77		운산 Au 광상 금홍석의 화학적 조성	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 µm	운산 Au 광상 금홍석의 화학적 조성 결과	운산 금 광상에서 산출되는 함 텅스텐 금홍석의 산상과 화학조성 (광물과 암석 v33n2p115-128)	40.189444 125.753611

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78		운산 금광석의 어두운 금홍석 원소들 간의 상관계수	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	운산 금광석의 어두운 금홍석 원소들 간의 상관계수	운산 금 광상에서 산출되는 함 텅스텐 금 홍석의 산상과 화학조성 (광물과 암석 v33n2p115-128)	40.189444 125.753611
79		운산 금광석의 밝은 금홍석 원소들 간의 상관계수	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	운산 금광석의 밝은 금홍석 원소들 간의 상관계수	운산 금 광상에서 산출되는 함 텅스텐 금 홍석의 산상과 화학조성 (광물과 암석 v33n2p115-128)	40.189444 125.753611
80		삼광금은광상 모암내 titanite의 화학조성	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금은광상 모암내 titanite의 화학조성 분석결과	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
81		삼광금은광상 titanite(모암) 원소간 상관계수	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금은광상 titanite(모암) 원소간 상관 계수	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
82		삼광금은광상 모암의 일메나이트 화학조성	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금은광상 모암의 일메나이트 화학조 성 분석결과	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
83		삼광금은광상 일메나이트(모암) 원소간 상관계수	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금은광상 일메나이트(모암) 원소간 상 관계수	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
84		삼광금금광상 rutile의 화학성분	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금금광상 rutile의 화학성분 분석결과	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
85		삼광금은광상 rutile(모암) 원소간 상관계수	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금은광상 rutile(모암) 원소간 상관계 수	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
86		삼광금은광상 rutile(엽리석영맥) 원소간 상관계수	EPMA /Shimadzu 1610	분석조건은 가속전압 20 keV, 시료 전류 2.0×10-8 A, 전자선의 크기 약 1~2 μm	삼광금은광상 rutile(엽리석영맥) 원소간 상관계수	삼광 금-은 광상에서 산출되는 함 티타늄 광물들의 산상 및 화학조성 (광물과 암석 v33n3p195-214)	36.520833 126.865833
87		검덕 Pb-Zn 광상에서 백운석의 화학 조성	(FE-EPMA) JEOL JXA-8530F PLUS	분석조건은 가속전압 15 keV, 시료 전류 2.0 × 10-8 A, 전자선의 크기 5~10 μm	검덕 Pb-Zn 광상에서 백운석의 화학 조성 분석결과	검덕 연-아연 광상의 돌로마이트 산상과 화학조성 (광물과 암석 v34n2p107-120)	40.883333 128.816667
88		모이산 금-은 광상내 수집된 vein 시료 설명		기존자료분석	모이산 금-은 광상내 수집된 vein 시료 설 명	해남 모이산 금-은 광상의 유체포유물 밀 황화물 지구화학 연구 (자원환경지질 v53n3p221-234)	34.950000 126.650000
89		시추 코어 시료의 금-은 품위 자료		기존자료분석	시추 코어 시료의 금-은 품위 자료	해남 모이산 금-은 광상의 유체포유물 밀 황화물 지구화학 연구 (자원환경지질 v53n3p221-234)	34.950000 126.650000
90		유체포유물의 microthermometry 온도	Linkam FTIR 600 heating-freezing stage	유체포유물을 냉각 후 가열하여 얼음의 녹는점 (Tm-ice)과 가열 후 하나의 상으로 균질화 되는 온 도(Th)를 측정	유체포유물의 microthermometry 온도 자 료	해남 모이산 금-은 광상의 유체포유물 밀 황화물 지구화학 연구 (자원환경지질 v53n3p221-234)	34.950000 126.650000
91		모이산 광상의 황철석에 대한 LA-ICP-MS 정밀분석 요약	레이저저삭박 유도 결합 플라즈마 질량분석 (laser ablation ICPMS)	각 분석 마다 60 초의 dwell time을 적용하였으며, 레이저 에너지 밀도는 6J/cm2,, 타격진동수 (repetition rate)는 5 Hz로 설정	모이산 광상의 황철석에 대한 LA-ICP-MS 정밀분석 요약	해남 모이산 금-은 광상의 유체포유물 밀 황화물 지구화학 연구 (자원환경지질 v53n3p221-234)	34.950000 126.650000
92		최하부 유천층군 응회암의 SHRIMP U-Pb Zircon 자료	SHRIMP Ile/MC	이온빔의 분석직경은 25 μm이며 세기는 4-6nA	최하부 유천층군 응회암의 SHRIMP U-Pb zircon 분석 자료	현종-부곡일원 최하부 유천층군의 산상 과 SHRIMP U-Pb 연대 (자원환경지질 v53n4p397-411)	35.685200 128.481100
93		나리 분석 퇴적층과 및 알봉 조면안산암의 대표 샘플에 대 한 장식 마이크로라이트의 조직 매개변수	Microscope		나리 분석 퇴적층과 및 알봉 조면안산암 의 대표 샘플에 대한 장식 마이크로라이 트의 조직분석 결과	울릉도 알봉 용암동의 미정 조직분석으로 부터 폭발성 및 분류성 분출간의 전환 해 석 (자원환경지질 v53n5p553-564)	37.521944 130.867778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
94	GJA-1/2, GJB-1/2	Geological map in the study area showing the classification and distribution of dikes. The intrusion attitude (strike/dip) of dikes is measured according to the right-hand rule.	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	Geological map in the study area showing the classification and distribution of dikes. The intrusion attitude (strike/dip) of dikes is measured according to the right-hand rule.	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 Petrol_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
95	GJA-1/2, GJB-1/2	Contoured π - (lower hemisphere, equal-area projection) and rose diagrams of the intrusion planes of (A) all dikes, (B) acidic dikes, and (C) mafic dikes, respectively. Great circles in (B) and (C) indicate the mean attitudes. Mean: Strike/dip are measured according to the right-hand rule.	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	Contoured π - (lower hemisphere, equal-area projection) and rose diagrams of the intrusion planes of (A) all dikes, (B) acidic dikes, and (C) mafic dikes, respectively. Great circles in (B) and (C) indicate the mean attitudes. Mean: Strike/dip are measured according to the right-hand rule.	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 Petrol_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
96	GJA-1/2, GJB-1/2	(A) Photomicrograph of nonporphyritic fine grained and intergranular texture in A-Group mafic dike with minerals of plagioclase, clinopyroxene, opaque, and olivine in the Gonggoji (under crossed polars, X40). A black arrow: Curved quench crystals of plagioclase forming sheaf-like aggregate and swallowtail sections in A-Group mafic dikes. (B) Photomicrograph of porphyritic very fine grained and trachytic texture in B-Group mafic dike with minerals of plagioclase, clinopyroxene, and opaque (under crossed polars, X40).	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	(A) Photomicrograph of nonporphyritic fine grained and intergranular texture in A-Group mafic dike with minerals of plagioclase, clinopyroxene, opaque, and olivine in the Gonggoji (under crossed polars, X40). A black arrow: Curved quench crystals of plagioclase forming sheaf-like aggregate and swallowtail sections in A-Group mafic dikes. (B) Photomicrograph of porphyritic very fine grained and trachytic texture in B-Group mafic dike with minerals of plagioclase, clinopyroxene, and opaque (under crossed polars, X40).	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 Petrol_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
97	GJA-1/2, GJB-1/2	(A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ for dikes of the study area (after Irvine and Baragar, 1971). (B) AFM diagram for dikes of the study area (after Irvine and Baragar, 1971). (C) Molar Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O) vs. molar Al ₂ O ₃ /(Na ₂ O+K ₂ O) diagram. ▽; GJA-1, ▼; GJA-2, ◇; GJB-1, ◆; GJB-2.	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	(A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ for dikes of the study area (after Irvine and Baragar, 1971). (B) AFM diagram for dikes of the study area (after Irvine and Baragar, 1971). (C) Molar Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O) vs. molar Al ₂ O ₃ /(Na ₂ O+K ₂ O) diagram. ▽; GJA-1, ▼; GJA-2, ◇; GJB-1, ◆; GJB-2.	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 Petrol_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
98	GJA-1/2, GJB-1/2	(A) C1 chondrite normalized spider diagram for trace element (Sun and McDonough, 1989). (B) C1 chondrite normalized REE patterns (Sun and McDonough, 1989). Symbols are the same as those in Fig. 5.	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	(A) C1 chondrite normalized spider diagram for trace element (Sun and McDonough, 1989). (B) C1 chondrite normalized REE patterns (Sun and McDonough, 1989). Symbols are the same as those in Fig. 5.	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 Petrol_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
99	GJA-1/2, GJB-1/2	Tectonic discriminant diagrams for mafic dikes in the study area. (A) MgO-Al ₂ O ₃ -FeO diagram (after Pearce et al., 1977) 1. Spreading center, 2. Orogenic suite, 3. Ocean ridge, 4. Ocean island, 5. Continental. (B) 10*MnO-10*P ₂ O ₅ -TiO ₂ diagram (after Mullen, 1983) CAB; Calc-alkaline basalts, IAT; Island arc tholeiites, MORB; Mid-ocean ridge basalts, OIA; Ocean island andesites, OIT; Ocean island tholeiites. (C) Th-Nb/16-Hf/3 diagram (after Wood, 1980) A; N-type MORB, B; E-type MORB and tholeiitic WPB and differentiates, C; Alkaline WPB and WPB and differentiates, D; Destructive plate-margin basalts and differentiates, Note: WPB; Within-plate basalts. (D) Zr/4-Y-2*Nb diagram (after Meschede, 1986, Fig. 1) Al-Al; Within-plate alkaline basalt, Al-C; Within-plate tholeiites, B; P-type MORB, D; N-type MORB, C-D; Volcanic arc basalts. Symbols are the same as those in Fig. 5.	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	Tectonic discriminant diagrams for mafic dikes in the study area. (A) MgO-Al ₂ O ₃ -FeO diagram (after Pearce et al., 1977) 1. Spreading center, 2. Orogenic suite, 3. Ocean ridge, 4. Ocean island, 5. Continental. (B) 10*MnO-10*P ₂ O ₅ -TiO ₂ diagram (after Mullen, 1983) CAB; Calc-alkaline basalts, IAT; Island arc tholeiites, MORB; Mid-ocean ridge basalts, OIA; Ocean island andesites, OIT; Ocean island tholeiites. (C) Th-Nb/16-Hf/3 diagram (after Wood, 1980) A; N-type MORB, B; E-type MORB and tholeiitic WPB and differentiates, C; Alkaline WPB and WPB and differentiates, D; Destructive plate-margin basalts and differentiates, Note: WPB; Within-plate basalts. (D) Zr/4-Y-2*Nb diagram (after Meschede, 1986, Fig. 1) Al-Al; Within-plate alkaline basalt, Al-C; Within-plate tholeiites, B; P-type MORB, D; N-type MORB, C-D; Volcanic arc basalts. Symbols are the same as those in Fig. 5.	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 PetroL_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
100	GJA-1/2, GJB-1/2	40Ar/39Ar release spectra and isochron diagrams from mafic dikes.	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	40Ar/39Ar release spectra and isochron diagrams from mafic dikes.	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 PetroL_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
101	GJA-1/2, GJB-1/2	Major elements, CIPW normative mineral compositions, and trace element abundances (ppm) of the dikes in the study area	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	Major elements, CIPW normative mineral compositions, and trace element abundances (ppm) of the dikes in the study area	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 PetroL_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
102	GJA-1/2, GJB-1/2	Whole rock K-Ar data for the mafic dikes and granite samples of the study area	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	Whole rock K-Ar data for the mafic dikes and granite samples of the study area	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 PetroL_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
103	GJA-1/2, GJB-1/2	40Ar/99Ar analytical data from whole rock in the study area	미상	지화학분석, K-Ar, 40Ar/39Ar 연대측정	40Ar/99Ar analytical data from whole rock in the study area	거제도 동부에 분포하는 고제3기 암맥군: 절대연대와 지구조적 의미 (암석학회지 PetroL_v16n2p082)	34.850000 128.700000; 34.850000 128.750000; 34.781389 128.750000; 34.781389 128.700000
104	K-56/58/99/143/147/154, GC-1~4	Geologic map of the study area.	미상	대자율 측정, XRF, K-Ar 연대측정	Geologic map of the study area.	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 PetroL_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
105	K-56/58/99/143/147/154, GC-1~4	Granulometric classification of the pyroclastic rocks by volumetric proportions of ash, lapilli, and blocks and bombs (Fisher, 1966). 1, K-56; 2, K-143; 3, K-154; 4, K-58; 5, K-99; 6, K-147.	미상	대자율 측정, XRF, K-Ar 연대측정	Granulometric classification of the pyroclastic rocks by volumetric proportions of ash, lapilli, and blocks and bombs (Fisher, 1966). 1, K-56; 2, K-143; 3, K-154; 4, K-58; 5, K-99; 6, K-147.	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 PetroL_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
106	K-56/58/99/143/147/154, GC-1~4	(A)-(G): Photographs of various rock fragments in the pyroclastic rocks. (A) andesitic rock fragment, (B) dyke fragment, (C) rhyolitic tuff fragment, (D) pumice, (E)(F)(G) granitic rock fragments; (H): granodiorite distributed both in and around the study area, which is very similar to the granitic clast (G) of the pyroclastic rocks in grain size, mineral composition, and texture (see text).	미상	대자율 측정, XRF, K-Ar 연대측정	(A)-(G): Photographs of various rock fragments in the pyroclastic rocks. (A) andesitic rock fragment, (B) dyke fragment, (C) rhyolitic tuff fragment, (D) pumice, (E)(F)(G) granitic rock fragments; (H): granodiorite distributed both in and around the study area, which is very similar to the granitic clast (G) of the pyroclastic rocks in grain size, mineral composition, and texture (see text).	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 Petrol_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
107	K-56/58/99/143/147/154, GC-1~4	Photomicrographs of the granitic rock fragments in pyroclastic rocks (A and C) and granodiorite (B) and biotite granite (D) in and around the study area. (A) and (C) are very similar to (B) and (D), respectively, in petrographic features. Both (A) and (B) show perthitic texture (white arrows) of feldspar, while (C) and (D) display similar micrographic texture of quartz and feldspar.	미상	대자율 측정, XRF, K-Ar 연대측정	Photomicrographs of the granitic rock fragments in pyroclastic rocks (A and C) and granodiorite (B) and biotite granite (D) in and around the study area. (A) and (C) are very similar to (B) and (D), respectively, in petrographic features. Both (A) and (B) show perthitic texture (white arrows) of feldspar, while (C) and (D) display similar micrographic texture of quartz and feldspar.	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 Petrol_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
108	K-56/58/99/143/147/154, GC-1~4	Chemical characteristics of granitic rock fragments in pyroclastic rocks and granodiorite in the study area, compared with granites in the Gadeokdo area. (A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ (after Irvine and Baragar, 1971). (B) AFM diagram (after Irvine and Baragar, 1971). (C) C1 chondrite normalized REE patterns (after Sun and McDonough, 1989).	미상	대자율 측정, XRF, K-Ar 연대측정	Chemical characteristics of granitic rock fragments in pyroclastic rocks and granodiorite in the study area, compared with granites in the Gadeokdo area. (A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ (after Irvine and Baragar, 1971). (B) AFM diagram (after Irvine and Baragar, 1971). (C) C1 chondrite normalized REE patterns (after Sun and McDonough, 1989).	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 Petrol_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
109	K-56/58/99/143/147/154, GC-1~4	Fragment-size analysis of pyroclastic rocks.	미상	대자율 측정, XRF, K-Ar 연대측정	Fragment-size analysis of pyroclastic rocks.	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 Petrol_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
110	K-56/58/99/143/147/154, GC-1~4	Major elements, CIPW normative mineral compositions, and trace element abundances (ppm) of the granitic rock fragments, granodiorite, and matrix of pyroclastic rocks.	미상	대자율 측정, XRF, K-Ar 연대측정	Major elements, CIPW normative mineral compositions, and trace element abundances (ppm) of the granitic rock fragments, granodiorite, and matrix of pyroclastic rocks.	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 Petrol_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
111	K-56/58/99/143/147/154, GC-1~4	Whole rock K-Ar data for andesitic rock fragments and andesitic dyke.	미상	대자율 측정, XRF, K-Ar 연대측정	Whole rock K-Ar data for andesitic rock fragments and andesitic dyke.	진해시 남동부 화성쇄설암 내 화강암편의 특징과 층서적 의미 (암석학회지 Petrol_v16n3p116)	35.166667 128.683333; 35.166667 128.750000; 35.086111 128.750000; 35.086111 128.683333
112	JB-10a, JB-10b, JB-10-□, JB-13-□	Simplified geological map of the study area around Chungnam coal field, Korea modified after Lee et al. (1996).	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Simplified geological map of the study area around Chungnam coal field, Korea modified after Lee et al. (1996).	충남 대전해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 Petrol_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
113	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	Photomicrographs of metamorphic textures from metasedimentary rocks of the Nampo group. (a) Phyllites showing strong foliation according to preferred orientation of biotite, muscovites and elongated quartz grains. (b) Phyllite from Daechon area with lots of porphyroblasts of biotites and garnets showing strongly foliated texture. (c) Phyllite from Mariangri area showing glomeroporphyritic texture of biotites. (d) Metasandstone including rather small grains of mica.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Photomicrographs of metamorphic textures from metasedimentary rocks of the Nampo group. (a) Phyllites showing strong foliation according to preferred orientation of biotite, muscovites and elongated quartz grains. (b) Phyllite from Daechon area with lots of porphyroblasts of biotites and garnets showing strongly foliated texture. (c) Phyllite from Mariangri area showing glomeroporphyritic texture of biotites. (d) Metasandstone including rather	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
114	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	X-ray composition maps of Mn, Ca, Fe and Mg of the garnet porphyroblast (JB-10 (1)).	GeoThermoBarometry V2.1	EPMA, K-Ar연대	X-ray composition maps of Mn, Ca, Fe and Mg of the garnet porphyroblast (JB-10 (1)).	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
115	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	X-ray composition maps of Mn, Ca, Fe and Mg of the garnet porphyroblast (JB-10 (2)).	GeoThermoBarometry V2.1	EPMA, K-Ar연대	X-ray composition maps of Mn, Ca, Fe and Mg of the garnet porphyroblast (JB-10 (2)).	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
116	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	Zoning profiles of garnet porphyroblasts. (a) JB-10 (1), (b) JB-10 (2).	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Zoning profiles of garnet porphyroblasts. (a) JB-10 (1), (b) JB-10 (2).	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
117	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	Results of geothermobarometric calculations for the assemblage of garnet-muscovite-biotite-plagioclase-quartz from metasedimentary rocks of the Nampo Group using GeoThermoBarometry program (Spear and Kohn, 1999). Grt-Bt thermometer calibrations: 1 = Ferry and Spear (1978), 2 = Hodges and Spear (1982), 3 = Ganguly and Saxena (1984; symmetric Garnet solution model), 4 = Ganguly and Saxena (1984; asymmetric Garnet solution model), 5 = Perchuk and Lavrent'eva (1983), 6 = Indares and Martignole (1985), 7 = Ferry and Spear with Berman (1990) garnet solution model, 8 = Patino Douce et al. (1993), 9 = Holdaway et al. (1997), 10= Gessmann et al. (1997), 11 = Kleemann and Reinhardt (1994). Grt-Pl-Mus-Bt barometer calibrations: a = Ghent and Stout (1981; Fe end member), b =Ghent and Stout (1981; Mg end member), c= Hodges and Crowley (1985), d =Powell and Holland (1988) with Hodges and Spear (1982) garnet activity model, e = Powell and Holland (1988) with Ganguly and Saxena (1984) garnet activity model, f= Hoisch (1990; Fe end member), g = Hoisch (1990; Mg end member).	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Results of geothermobarometric calculations for the assemblage of garnet-muscovite-biotite-plagioclase-quartz from metasedimentary rocks of the Nampo Group using GeoThermoBarometry program (Spear and Kohn, 1999). Grt-Bt thermometer calibrations: 1 = Ferry and Spear (1978), 2 = Hodges and Spear (1982), 3 = Ganguly and Saxena (1984; symmetric Garnet solution model), 4 = Ganguly and Saxena (1984; asymmetric Garnet solution model), 5 = Perchuk and Lavrent'eva (1983), 6 = Indares and Martignole (1985), 7 = Ferry and Spear with Berman (1990) garnet solution model, 8 = Patino Douce et al. (1993), 9 = Holdaway et al. (1997), 10= Gessmann et al. (1997), 11 = Kleemann and Reinhardt (1994). Grt-Pl-Mus-Bt barometer calibrations: a = Ghent and Stout (1981; Fe end member), b =Ghent and Stout (1981; Mg end member), c= Hodges and Crowley (1985), d =Powell and Holland (1988) with Hodges and Spear (1982) garnet activity model, e = Powell and Holland (1988) with Ganguly	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
118	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	P-T diagram illustrating simplified KFMASH petrogenic grid with XMnGrt isopleths (modified after Figure 10-9 in Spear, 1993) and estimates for metamorphism of the Nampo Group metasedimentary rocks.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	P-T diagram illustrating simplified KFMASH petrogenic grid with XMnGrt isopleths (modified after Figure 10-9 in Spear, 1993) and estimates for metamorphism of the Nampo Group metasedimentary rocks.	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
119	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	P-T-t paths for metasedimentary rocks of the Nampo group, Dashed and solid arrows represent hypothetical prograde and proposed retrograde P-T paths.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	P-T-t paths for metasedimentary rocks of the Nampo group, Dashed and solid arrows represent hypothetical prograde and proposed retrograde P-T paths.	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
120	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	Compositions of garnets from metasediments of Nampo Group.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Compositions of garnets from metasediments of Nampo Group.	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
121	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	Compositions of biotites, muscovites and plagioclases from metasediments of Nampo Group.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Compositions of biotites, muscovites and plagioclases from metasediments of Nampo Group.	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
122	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	Pressure-Temperature conditions of peak metamorphism of metasediments from Nampo Group.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	Pressure-Temperature conditions of peak metamorphism of metasediments from Nampo Group.	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 PetroL_v17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
123	JB-10a, JB-10b, JB-10-□, JB-13-ㄴ	K-Ar ages of biotites from metasediments of Nampo Group.	GeoThermoBarometry V2.1	EPMA, K-Ar연대	K-Ar ages of biotites from metasediments of Nampo Group.	충남 대천해수욕장과 서천군 마량리 지역에 분포된 남포층군 변성퇴적암층의 변성 지구조 진화 (암석학회지 Petrology 17n1p001)	36.801611 126.331528; 36.801611 127.191722; 36.000000 127.191722; 36.000000 126.331528
124	CP02/07/09/10/11/26, S07/11/26/36	Geologic map from study area. Mineral assemblage of most metasedimentary and metaigneous rocks and sampling sites of leucogranites and migmatite leucosomes are shown for representative samples. Mineral abbreviations are after Kretz (1983).	미상	XRF, ICP-MS	Geologic map from study area. Mineral assemblage of most metasedimentary and metaigneous rocks and sampling sites of leucogranites and migmatite leucosomes are shown for representative samples. Mineral abbreviations are after Kretz (1983).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrology 17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
125	CP02/07/09/10/11/26, S07/11/26/36	Petrogenetic grid constructed with program Gibbs (Spear and Menard, 1989) using dataset of Holland and Powell (1998). A grey rectangle near Grt zone is P-T value of TWQ estimated using mineral data.	미상	XRF, ICP-MS	Petrogenetic grid constructed with program Gibbs (Spear and Menard, 1989) using dataset of Holland and Powell (1998). A grey rectangle near Grt zone is P-T value of TWQ estimated using mineral data.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrology 17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
126	CP02/07/09/10/11/26, S07/11/26/36	Harker diagrams showing difference among metasedimentary rocks (dashed field), biotite granitic gneisses (gray field; unpublished data) and leucogranites (black circles). (a) FeOtot value is calculated by $FeO_{3tot} \times 0.8998$.	미상	XRF, ICP-MS	Harker diagrams showing difference among metasedimentary rocks (dashed field), biotite granitic gneisses (gray field; unpublished data) and leucogranites (black circles). (a) FeOtot value is calculated by $FeO_{3tot} \times 0.8998$.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrology 17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
127	CP02/07/09/10/11/26, S07/11/26/36	Rock classification diagrams. (a) R1-R2 diagram of leucogranite (black dots) and biotite granite gneiss (gray field) related to tectonic setting (dashed lines; Batchelor and Bowden, 1985) and rock classification (solid lines; De la Roche et al., 1980). In rock classification, 1: granodiorite, 2: granite and 3: alkali granite. A gray field is biotite granitic gneisses (b) A/CNK [Molar $Al_2O_3/(CaO+Na_2O+K_2O)$] vs. Discriminant factor (DF) diagram. Symbols are the same as Fig. 4.	미상	XRF, ICP-MS	Rock classification diagrams. (a) R1-R2 diagram of leucogranite (black dots) and biotite granite gneiss (gray field) related to tectonic setting (dashed lines; Batchelor and Bowden, 1985) and rock classification (solid lines; De la Roche et al., 1980). In rock classification, 1: granodiorite, 2: granite and 3: alkali granite. A gray field is biotite granitic gneisses (b) A/CNK [Molar $Al_2O_3/(CaO+Na_2O+K_2O)$] vs. Discriminant factor (DF) diagram. Symbols are the same as Fig. 4.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrology 17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
128	CP02/07/09/10/11/26, S07/11/26/36	Multi-element variation diagrams normalized to the primitive mantle value of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	미상	XRF, ICP-MS	Multi-element variation diagrams normalized to the primitive mantle value of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrology 17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
129	CP02/07/09/10/11/26, S07/11/26/36	Rare earth element (REE) variation diagrams normalized to the chondrite values of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	미상	XRF, ICP-MS	Rare earth element (REE) variation diagrams normalized to the chondrite values of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrology 17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
130	CP02/07/09/10/11/26, S07/11/26/36	CIPW normative Qtz-Or-Ab composition of leucogranites represents the glass compositions obtained by melting biotite schist (1, 2; gray field and solid arrow) and two-mica (3; dashed field and arrow) pelites at 750-1000°C, 3 kbar (Spicer et al., 2004). Arrows represent compositional change of melts with increasing temperature. Liquidus phase relations in the system Qtz-Ab-Or-H ₂ O at 5 kbar and X(H ₂ O)=1.0 are taken from Holtz et al. (1992)	미상	XRF, ICP-MS	CIPW normative Qtz-Or-Ab composition of leucogranites represents the glass compositions obtained by melting biotite schist (1, 2; gray field and solid arrow) and two-mica (3; dashed field and arrow) pelites at 750-1000°C, 3 kbar (Spicer et al., 2004). Arrows represent compositional change of melts with increasing temperature. Liquidus phase relations in the system Qtz-Ab-Or-H ₂ O at 5 kbar and X(H ₂ O)=1.0 are taken from Holtz et al. (1992)	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 PetroL_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
131	CP02/07/09/10/11/26, S07/11/26/36	Tectonic discrimination diagram of leucogranite (black circles) and biotite granite gneiss (gray field) based on (a) Rb vs. Y+Nd, (b) Nb vs. Y, (c) Rb vs. Ta+Yb and (d) Ta vs. Yb. Tectonic abbreviations syn-collisional granite (synCOLG), volcanic arc granite (VAG), within plate granite (WPG) and oceanic ridge granite (ORG).	미상	XRF, ICP-MS	Tectonic discrimination diagram of leucogranite (black circles) and biotite granite gneiss (gray field) based on (a) Rb vs. Y+Nd, (b) Nb vs. Y, (c) Rb vs. Ta+Yb and (d) Ta vs. Yb. Tectonic abbreviations syn-collisional granite (synCOLG), volcanic arc granite (VAG), within plate granite (WPG) and oceanic	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 PetroL_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
132	CP02/07/09/10/11/26, S07/11/26/36	Chondrite-normalized REE pattern (Taylor and McLennan, 1985) of component mixture models. (a) Mineral modal property in migmatite (P19-1) from study area and REE concentrations in melanosome from Bea et al. (1994). (b) Leucogranite (CP02) and rhyolite from Nash and Crecraft (1994). Data are listed Table 7.	미상	XRF, ICP-MS	Chondrite-normalized REE pattern (Taylor and McLennan, 1985) of component mixture models. (a) Mineral modal property in migmatite (P19-1) from study area and REE concentrations in melanosome from Bea et al. (1994). (b) Leucogranite (CP02) and rhyolite from Nash and Crecraft (1994). Data are listed Table 7.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 PetroL_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
133	CP02/07/09/10/11/26, S07/11/26/36	(a) Ba vs. Sr, (b) Ba vs. Eu, (c) Rb vs. Sr and (d) Rb vs. Eu variations with vector lines according to partition coefficients of plagioclase, K-feldspar, biotite and garnet in rhyolite (Nash and crecraft, 1985; N) and leucosome (Bea et al., 1994; B). Gray area is biotite granitic gneiss. Dashed area is metasedimentary rocks.	미상	XRF, ICP-MS	(a) Ba vs. Sr, (b) Ba vs. Eu, (c) Rb vs. Sr and (d) Rb vs. Eu variations with vector lines according to partition coefficients of plagioclase, K-feldspar, biotite and garnet in rhyolite (Nash and crecraft, 1985; N) and leucosome (Bea et al., 1994; B). Gray area is biotite granitic gneiss. Dashed area is metasedimentary	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 PetroL_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
134	CP02/07/09/10/11/26, S07/11/26/36	List of mineral assemblage of representative samples.	미상	XRF, ICP-MS	List of mineral assemblage of representative samples.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 PetroL_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
135	CP02/07/09/10/11/26, S07/11/26/36	Major element (wt%) data for leucogranites and a leucosome and metasedimentary rock with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	미상	XRF, ICP-MS	Major element (wt%) data for leucogranites and a leucosome and metasedimentary rock with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 PetroL_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
136	CP02/07/09/10/11/26, S07/11/26/36	Trace and rare earth element (ppm) data for leucogranites, leucosomes and metasedimentary rocks with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	미상	XRF, ICP-MS	Trace and rare earth element (ppm) data for leucogranites, leucosomes and metasedimentary rocks with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrol_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
137	CP02/07/09/10/11/26, S07/11/26/36	Resultant value of models and mineral data in melanosome from migmatite (Bea et al., 1994) used for modeling.	미상	XRF, ICP-MS	Resultant value of models and mineral data in melanosome from migmatite (Bea et al., 1994) used for modeling.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrol_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
138	CP02/07/09/10/11/26, S07/11/26/36	Resultant value of models and mineral data in rhyolite (Nash and Crecraft, 1985) used for modeling.	미상	XRF, ICP-MS	Resultant value of models and mineral data in rhyolite (Nash and Crecraft, 1985) used for modeling.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrol_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
139	CP02/07/09/10/11/26, S07/11/26/36	Summary of F values estimated by Equation (6).	미상	XRF, ICP-MS	Summary of F values estimated by Equation (6).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화 (암석학회지 Petrol_v17n1p016)	37.340919 129.037725; 37.340919 129.367967; 37.146108 129.367967; 37.146108 129.037725
140	UJ11/15/16/28/45/9-1/10/34-1/47/65	Regional geological map of northeastern Yeongnam massif modified after Whang et al. (1996) and Kim et al. (2001). The inset figure shows the location of the study area. NM: Nangrim Massif, PB: Pyeongnam Basin, IB : Imjingang Belt, TB: Taebaeksan Basin, GM: Gyeonggi Massif, OB; Okcheon Belt, YM: Yeongnam Massif, GB: Gyeongsang Basin.	미상	SHRIMP	Regional geological map of northeastern Yeongnam massif modified after Whang et al. (1996) and Kim et al. (2001). The inset figure shows the location of the study area. NM: Nangrim Massif, PB: Pyeongnam Basin, IB : Imjingang Belt, TB: Taebaeksan Basin, GM: Gyeonggi Massif, OB; Okcheon Belt, YM: Yeongnam Massif,	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
141	UJ11/15/16/28/45/9-1/10/34-1/47/65	Geological map of study area modified after Kim et al. (1963a), Kim et al. (1963b), Kim et al. (1963c), and Yoon and Shin (1963).	미상	SHRIMP	Geological map of study area modified after Kim et al. (1963a), Kim et al. (1963b), Kim et al. (1963c), and Yoon and Shin (1963).	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
142	UJ11/15/16/28/45/9-1/10/34-1/47/65	Photomicrographs of Pyeonghae granite gneiss (a, b) and Hada leuco-granite gneiss (c, d).	미상	SHRIMP	Photomicrographs of Pyeonghae granite gneiss (a, b) and Hada leuco-granite gneiss (c, d).	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
143	UJ11/15/16/28/45/9-1/10/34-1/47/65	Geochemical classification diagrams for analysed samples. A: Irvine and Baraga(1971), B: Maniar and Piccoli(1989). open circle, Pyeonghae granite gneiss; solid square, Hada leuco-granite gneiss.	미상	SHRIMP	Geochemical classification diagrams for analysed samples. A: Irvine and Baraga(1971), B: Maniar and Piccoli(1989). open circle, Pyeonghae granite gneiss; solid square, Hada leuco-	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
144	UJ11/15/16/28/45/9-1/10/34-1/47/65	The classification of plutonic rocks using their molecular normative compositions (after Streckesien and Le Maitre, 1979). Symbols are the same as Fig. 5.	미상	SHRIMP	The classification of plutonic rocks using their molecular normative compositions (after Streckesien and Le Maitre, 1979). Symbols are the same as Fig. 5.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
145	UJ11/15/16/28/45/9-1/10/34-1/47/65	Harker variation diagram for the analysed samples. Symbols are the same as Fig. 5.	미상	SHRIMP	Harker variation diagram for the analysed samples. Symbols are the same as Fig. 5.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
146	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	REE patterns (a) and multi-element patterns (b) for the analysed samples. Symbols are the same as Fig. 5.	미상	SHRIMP	REE patterns (a) and multi-element patterns (b) for the analysed samples. Symbols are the same as Fig. 5.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
147	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	Tectonic discrimination diagrams (after Pearce et al., 1984) based on (a) Y vs. Nb and (b) Y+Nb vs. Rb. Symbols are the same as Fig. 5. Tectonic abbreviations: Syn-collisional granite (Syn-COLG), volcanic arc granite (VAG), within plate granite (WPG), and oceanic ridge granite (ORG).	미상	SHRIMP	Tectonic discrimination diagrams (after Pearce et al., 1984) based on (a) Y vs. Nb and (b) Y+Nb vs. Rb. Symbols are the same as Fig. 5. Tectonic abbreviations: Syn-collisional granite (Syn-COLG), volcanic arc granite (VAG), within plate granite (WPG), and oceanic ridge granite (ORG).	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
148	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	Cathodoluminescence images showing the analytical spots of zircon from the Pyeonghae granite gneiss. 207Pb*/206Pb ages (Ma) together with one sigma errors are given.	미상	SHRIMP	Cathodoluminescence images showing the analytical spots of zircon from the Pyeonghae granite gneiss. 207Pb*/206Pb ages (Ma) together with one sigma errors are given.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
149	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	Cathodoluminescence images showing the analytical spots of zircon from the Hada leuco-granite gneiss. 207Pb*/206Pb ages (Ma) together with one sigma errors are given.	미상	SHRIMP	Cathodoluminescence images showing the analytical spots of zircon from the Hada leuco-granite gneiss. 207Pb*/206Pb ages (Ma) together with one sigma errors are given.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
150	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	Concordia plot of SHRIMP U-Pb data for zircons from (a) Pyeonghae granite gneiss and (b) Hada leuco-granite gneiss.	미상	SHRIMP	Concordia plot of SHRIMP U-Pb data for zircons from (a) Pyeonghae granite gneiss and (b) Hada leuco-granite gneiss.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
151	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	Major element and CIPW norm data of Pyeonghae granite gneiss and Hada leuco-granite gneiss.	미상	SHRIMP	Major element and CIPW norm data of Pyeonghae granite gneiss and Hada leuco-granite gneiss.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
152	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	Trace and REE data of Pyeonghae granite gneiss and Hada leuco-granite gneiss.	미상	SHRIMP	Trace and REE data of Pyeonghae granite gneiss and Hada leuco-granite gneiss.	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
153	UJ11/15/16/28/45/9 9-1/10/34-1/47/65	SHRIMP zircon data from Pyeonghae granite gneiss (UJ-45) and Hada Leuco-granite gneiss (UJ-65) in the northeastern part of the Yeongnam massif of Korea.	미상	SHRIMP	SHRIMP zircon data from Pyeonghae granite gneiss (UJ-45) and Hada Leuco-granite gneiss (UJ-65) in the northeastern part of the Yeongnam	영남(소백산)육괴 북동부 평해지역 화강편마암류의 SHRIMP U-Pb 저콘 연대 (암석학회지 Petrol_v18n1p031)	37.080633 128.901089; 37.080633 129.528014; 36.507192 129.528014; 36.507192 128.901089
154	A/B/C/D/HA/HC	Geologic map of the study area modified after Park et al.(1997). ①: Otanri, ②: Guwoonri, ③: Nolmigol, ④: Seoojiri. IB: Imjingang Belt; GM: Gyeonggi Massif; OB: Okcheon Belt; YM: Yeongnam Massif; GB: Gyeongsang Basin.	미상	ICP-MS	Geologic map of the study area modified after Park et al.(1997). ①: Otanri, ②: Guwoonri, ③: Nolmigol, ④: Seoojiri. IB: Imjingang Belt; GM: Gyeonggi Massif; OB: Okcheon Belt; YM: Yeongnam Massif; GB: Gyeongsang	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
155	A/B/C/D/HA/HC	Detailed geologic map and sampling locations of the hornblende gabbro(Sag, Pag)-lamprophyre-diorite Complex in Guoonri, Hwacheon. Sag: Subspherical amphibole gabbro; Pag: Prismatic amphibole gabbro.	미상	ICP-MS	Detailed geologic map and sampling locations of the hornblende gabbro(Sag, Pag)-lamprophyre-diorite Complex in Guoonri, Hwacheon. Sag: Subspherical amphibole gabbro; Pag: Prismatic amphibole gabbro.	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 PetroL_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
156	A/B/C/D/HA/HC	Harker variation diagram of major elements for the hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon.	미상	ICP-MS	Harker variation diagram of major elements for the hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon.	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 PetroL_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
157	A/B/C/D/HA/HC	Harker variation diagram of trace elements for the hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon.	미상	ICP-MS	Harker variation diagram of trace elements for the hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon.	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 PetroL_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
158	A/B/C/D/HA/HC	Spider diagram showing average trace element concentrations of hornblende gabbro (Sag, Pag), lamprophyre, and diorite in Guwoonri, Hwacheon normalized to the composition of the MORB by Pearce(1983)	미상	ICP-MS	Spider diagram showing average trace element concentrations of hornblende gabbro (Sag, Pag), lamprophyre, and diorite in Guwoonri, Hwacheon normalized to the composition of the MORB by Pearce(1983)	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 PetroL_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
159	A/B/C/D/HA/HC	Chondrite-normalized average REE patterns of hornblende gabbro (Sag, Pag), lamprophyre, and diorite in Guwoonri normalized to the composition of the chondrite by Nakamura(1974) and Boynton(1984). Sag and Pag show parallel variation REE pattern, which is suggestive of a generation of Sag and Pag through a fractional crystallization from a single magma. Different slopes ((La/Lu)CN) shown in REE patterns between hornblende gabbro(Sag, Pag) and lamprophyre, and diorite are thought to indicate that hornblende gabbro, lamprophyre, and diorite in Guwoonri were originated from distinct magmas derived from common source rock by different degree of partial melting.	미상	ICP-MS	Chondrite-normalized average REE patterns of hornblende gabbro (Sag, Pag), lamprophyre, and diorite in Guwoonri normalized to the composition of the chondrite by Nakamura(1974) and Boynton(1984). Sag and Pag show parallel variation REE pattern, which is suggestive of a generation of Sag and Pag through a fractional crystallization from a single magma. Different slopes ((La/Lu)CN) shown in REE patterns between hornblende gabbro(Sag, Pag) and lamprophyre, and diorite are thought to indicate that hornblende gabbro, lamprophyre, and diorite in Guwoonri were originated from distinct magmas derived from common source rock by	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 PetroL_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
160	A/B/C/D/HA/HC	Bivariate ratio plots of Th/Tb vs Th/K, Th/Tb vs Th/Ba, and Th/Tb vs Th/Tb for hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon. The two different trends shown in bivariate ratio plots for hornblende gabbro-lamprophyre and diorite are thought to indicate that they were originated from distinct magma pulses, not from a single magma.	미상	ICP-MS	Bivariate ratio plots of Th/Tb vs Th/K, Th/Tb vs Th/Ba, and Th/Tb vs Th/Tb for hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon. The two different trends shown in bivariate ratio plots for hornblende gabbro-lamprophyre and diorite are thought to indicate that they were originated from distinct magma pulses, not from a	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 PetroL_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
161	A/B/C/D/HA/HC	The Cr-Y tectonic environment discrimination diagram of the hornblende gabbro-lamprophyre-diorite Complex in Guwoonri, Hwacheon(Pearce, 1982). Hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon are plotted in VAB area, which indicates magmas responsible for generation of hornblende gabbro, lamprophyre, and diorite in Guwoonri were originated near subduction zone. VAB: volcanic-arc basalts, MORB: mid-ocean ridge basalts, WPB: within-plate basalts.	미상	ICP-MS	The Cr-Y tectonic environment discrimination diagram of the hornblende gabbro-lamprophyre-diorite Complex in Guwoonri, Hwacheon(Pearce, 1982). Hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon are plotted in VAB area, which indicates magmas responsible for generation of hornblende gabbro, lamprophyre, and diorite in Guwoonri were originated near subduction zone. VAB: volcanic-arc basalts, MORB: mid-ocean ridge basalts,	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
162	A/B/C/D/HA/HC	The Zr/Y-Ti/Y discrimination diagram of hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon (after Pearce and Gale, 1977). Mafic rocks of hornblende gabbro and lamprophyre in Guwoonri, Hwacheon are plotted in plate margin basalt field.	미상	ICP-MS	The Zr/Y-Ti/Y discrimination diagram of hornblende gabbro, lamprophyre, and diorite in Guwoonri, Hwacheon (after Pearce and Gale, 1977). Mafic rocks of hornblende gabbro and lamprophyre in Guwoonri, Hwacheon are plotted in plate margin basalt field.	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
163	A/B/C/D/HA/HC	Mineral mode of hornblende gabbro(Sag, Pag), lamprophyre, and diorite in Guwoonri, Hwacheon	미상	ICP-MS	Mineral mode of hornblende gabbro(Sag, Pag), lamprophyre, and diorite in Guwoonri, Hwacheon	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
164	A/B/C/D/HA/HC	Concentrations of major and trace elements of hornblende gabbro(Sag, Pag), lamprophyre, in Guwoonri, Hwacheon	미상	ICP-MS	Concentrations of major and trace elements of hornblende gabbro(Sag, Pag), lamprophyre, in Guwoonri, Hwacheon	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
165	A/B/C/D/HA/HC	Concentrations of rare earth elements of hornblende gabbro(Sag, Pag), lamprophyre, and diorite in Guwoonri, Hwacheon	미상	ICP-MS	Concentrations of rare earth elements of hornblende gabbro(Sag, Pag), lamprophyre, and diorite in Guwoonri, Hwacheon	화천 구운리 일대에 분포하는 각섬석 반려암-황반암-섬록암 복합체의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v18n2p153)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
166	09SR-1~7, 0908SR-1~7	Geological map of the Haenam area showing the location of the Sunshin mine with Ogmaesan and the geotectonic environment (after Panther et al., 2006).	미상	현미경조사	Geological map of the Haenam area showing the location of the Sunshin mine with Ogmaesan and the geotectonic environment (after Panther	전남 해남의 순신 금광산 지역에 산출하는 응회질암에 포획된 유리포유물 (암석학회지 Petrol_v18n4p337)	34.560692 126.385414
167	09SR-1~7, 0908SR-1~7	Photomicrographs of textural features of the host rocks. (a) Welded tuff with deformed vesicles and glass shards. (b) Welded tuff with pearl cracks. (c) Altered dacite with embayed quartz and plagioclase. (d) Quartz vein hosted in the tuff showing comb structure. (e) Chalcopyrite bordering galena and replacing sphalerite. (f) Chalcopyrite overgrowing on the pyrite. cpy=chalcopyrite, gn=galena, sph=sphalerite, py=pyrite.	미상	현미경조사	Photomicrographs of textural features of the host rocks. (a) Welded tuff with deformed vesicles and glass shards. (b) Welded tuff with pearl cracks. (c) Altered dacite with embayed quartz and plagioclase. (d) Quartz vein hosted in the tuff showing comb structure. (e) Chalcopyrite bordering galena and replacing sphalerite. (f) Chalcopyrite overgrowing on the pyrite. cpy=chalcopyrite, gn=galena, sph=sphalerite, py=pyrite.	전남 해남의 순신 금광산 지역에 산출하는 응회질암에 포획된 유리포유물 (암석학회지 Petrol_v18n4p337)	34.560692 126.385414

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
168	09SR-1~7, 0908SR-1~7	Various glass inclusions trapped in quartz phenocrysts of tuffaceous rocks from Sunshin Au mining area. (a, b) Glass inclusions in hexagonal to cubic shape along the growth zone of the host quartz crystal consisting of homogeneous glass phase and a vapor bubble. Note the large devitrified glass inclusions associated with a microcrack. (c, d) Glass inclusions trapped at the margin of the quartz phenocryst containing needle-like daughter crystals. Note the large vapor bubble size compared to the size of the inclusion. (e) A devitrified glass inclusion at the margin of the host. (f) Glass inclusions with spinifex-like daughter crystals. (g) Glass inclusions with a small birefringent daughter crystal. (h) Glass inclusions with opaque crystal inside the vapor bubble. (i) Glass inclusions attached to apatite. (j) Glass inclusion without daughter crystals. dv=devitrified.	미상	현미경조사	Various glass inclusions trapped in quartz phenocrysts of tuffaceous rocks from Sunshin Au mining area. (a, b) Glass inclusions in hexagonal to cubic shape along the growth zone of the host quartz crystal consisting of homogeneous glass phase and a vapor bubble. Note the large devitrified glass inclusions associated with a microcrack. (c, d) Glass inclusions trapped at the margin of the quartz phenocryst containing needle-like daughter crystals. Note the large vapor bubble size compared to the size of the inclusion. (e) A devitrified glass inclusion at the margin of the host. (f) Glass inclusions with spinifex-like daughter crystals. (g) Glass inclusions with a small birefringent daughter crystal. (h) Glass inclusions with opaque crystal inside the vapor bubble. (i) Glass inclusions attached to apatite. (j) Glass inclusion without	전남 해남의 순신 금광산 지역에 산출하는 응회질암에 포획된 유리포유물 (암석학회지 Petrol_v18n4p337)	34.560692 126.385414
169	09SR-1~7, 0908SR-1~7	(a) Na ₂ O+K ₂ O vs. SiO ₂ and (b) K ₂ O vs. SiO ₂ diagrams of glass compositions. cross=glass inclusions without daughter crystals, solid circle=glass inclusions with daughter crystals.	미상	현미경조사	(a) Na ₂ O+K ₂ O vs. SiO ₂ and (b) K ₂ O vs. SiO ₂ diagrams of glass compositions. cross=glass inclusions without daughter crystals, solid circle=glass inclusions with daughter crystals.	전남 해남의 순신 금광산 지역에 산출하는 응회질암에 포획된 유리포유물 (암석학회지 Petrol_v18n4p337)	34.560692 126.385414
170	09SR-1~7, 0908SR-1~7	Chemical composition of the glass trapped in quartz phenocrysts of the tuffaceous rocks from Sunshin Au deposit, Haenam. NOD=no daughter crystals in the glass inclusion. YED= daughter crystals are present in the glass inclusion	미상	현미경조사	Chemical composition of the glass trapped in quartz phenocrysts of the tuffaceous rocks from Sunshin Au deposit, Haenam. NOD=no daughter crystals in the glass inclusion. YED= daughter crystals are present in the	전남 해남의 순신 금광산 지역에 산출하는 응회질암에 포획된 유리포유물 (암석학회지 Petrol_v18n4p337)	34.560692 126.385414
171	09SR-1~7, 0908SR-1~7	Chemical composition of daughter crystals in the glass inclusions from Sunshin Au deposit, Haenam	미상	현미경조사	Chemical composition of daughter crystals in the glass inclusions from Sunshin Au deposit, Haenam	전남 해남의 순신 금광산 지역에 산출하는 응회질암에 포획된 유리포유물 (암석학회지 Petrol_v18n4p337)	34.560692 126.385414
172	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	Geological map of the Hadong anorthosites and their vicinities [modified from Jeong et al. (1989) and Lee et al. (1999)] with the localities of Fe-Ti ore bodies. HD78: Cheongryong-ri body, HD50: Wolhoengri body, HD63: Jonghwa-ri body, HD60: Jayang-ri body, HD77: Taeso body, HD75: Deokcheon-river body, HD80: Baekun-valley body, HD84: Daehyeonchon body.	미상	현미경조사, 주성분분석	Geological map of the Hadong anorthosites and their vicinities [modified from Jeong et al. (1989) and Lee et al. (1999)] with the localities of Fe-Ti ore bodies. HD78: Cheongryong-ri body, HD50: Wolhoengri body, HD63: Jonghwa-ri body, HD60: Jayang-ri body, HD77: Taeso body, HD75: Deokcheon-river body, HD80: Baekun-valley body, HD84: Daehyeonchon body.	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
173	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	Photomicrographs of the Wolhoeng-ri (A and B), Jayang-ri (C), and Taeso Fe-Ti ore bodies (D), respectively. Note S-C fabric, as a sense-of-shear indicator, indicating dextral shearing in the Taeso body. Crossed nicols. Am: amphibole, Ga: garnet, IL: Ilmenite, Q: quartz, Pl: plagioclase, C: shear surface, S: schistosity surface.	미상	현미경조사, 주성분분석	Photomicrographs of the Wolhoeng-ri (A and B), Jayang-ri (C), and Taeso Fe-Ti ore bodies (D), respectively. Note S-C fabric, as a sense-of-shear indicator, indicating dextral shearing in the Taeso body. Crossed nicols. Am: amphibole, Ga: garnet, IL: Ilmenite, Q: quartz, Pl: plagioclase, C: shear surface, S: schistosity surface.	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111
174	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	Back-scattered electron images of ilmenites in Wolhoeng-ri ore body (A, B, and (C) and in Jayang-ri ore body. (D) IL: ilmenite, Am: amphibole, Rt: rutile, Qz: quartz, Pl: plagioclase.	미상	현미경조사, 주성분분석	Back-scattered electron images of ilmenites in Wolhoeng-ri ore body (A, B, and (C) and in Jayang-ri ore body. (D) IL: ilmenite, Am: amphibole, Rt: rutile, Qz: quartz, Pl: plagioclase.	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111
175	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	X-ray mapping images of ilmenite and rutile in Fe-Ti ore bodies. (A) Fe mapping and (B) Ti mapping of ilmenite and rutile in the Wolhoeng-ri ore body, respectively. (C) Fe mapping and (D) Ti mapping of ilmenite in the Taeso ore body, respectively. IL: ilmenite, Am: amphibole, Rt: rutile.	미상	현미경조사, 주성분분석	X-ray mapping images of ilmenite and rutile in Fe-Ti ore bodies. (A) Fe mapping and (B) Ti mapping of ilmenite and rutile in the Wolhoeng-ri ore body, respectively. (C) Fe mapping and (D) Ti mapping of ilmenite in the Taeso ore body, respectively. IL: ilmenite, Am: amphibole, Rt: rutile.	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111
176	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	Contoured stereographic π -projection showing the attitudes of foliation observed in the southern part (A) and the northern part (B) of the study area, respectively, indicating NNE-trending folding after the formation of foliation of the anorthositic rocks. Small squares indicate π -axes calculated using the attitudes.	미상	현미경조사, 주성분분석	Contoured stereographic π -projection showing the attitudes of foliation observed in the southern part (A) and the northern part (B) of the study area, respectively, indicating NNE-trending folding after the formation of foliation of the anorthositic rocks. Small squares indicate π -axes calculated using the attitudes.	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111
177	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	(A) and (C) Stereographic projections of the attitudes of dextral and sinistral shear zones observed in the study area, respectively. Red arrows indicate the movement sense of the dextral shear zones, indicating a top-to-the-northwest sense. Representative dextral and sinistral shear zones showing Z-shaped drag folding of a competent layer (B) and dragging of previous foliation as indicators of shear sense (D), respectively. Note the relative chronology among foliation, sinistral shear zone, and mafic dyke in the photograph (D).	미상	현미경조사, 주성분분석	(A) and (C) Stereographic projections of the attitudes of dextral and sinistral shear zones observed in the study area, respectively. Red arrows indicate the movement sense of the dextral shear zones, indicating a top-to-the-northwest sense. Representative dextral and sinistral shear zones showing Z-shaped drag folding of a competent layer (B) and dragging of previous foliation as indicators of shear sense (D), respectively. Note the relative chronology among foliation, sinistral shear zone, and mafic dyke in the	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111
178	HD43, HD50, HD60, HD63, HD75, HD77, HD78, HD80	Representative chemical compositions of ilmenite and rutile from Fe-Ti	미상	현미경조사, 주성분분석	Representative chemical compositions of ilmenite and rutile from Fe-Ti	원생대 하동회장암체 내 철-티탄 광체의 산상과 변형 (암석학회지 Petrol_v19n1p031)	35.390750 127.832111; 35.390750 127.900197; 35.107750 127.900197; 35.107750 127.832111

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
179	GY-9, Silla-14, KU-5	Geologic map of the Cretaceous Gyeongsang Basin, showing sample locations of the present study together with the SHRIMP U-Pb zircon ages of the youngest populations.	미상	SHRIMP	Geologic map of the Cretaceous Gyeongsang Basin, showing sample locations of the present study together with the SHRIMP U-Pb zircon ages of the youngest populations.	경상분지 진주층 및 신라역암의 SHRIMP U-Pb 저어콘 연령분포 및 그 의미 (암석학회지 Petrol_v19n1p089)	36.900200 127.503306; 36.900200 128.634758; 34.664717 128.634758; 34.664717 127.503306
180	GY-9, Silla-14, KU-5	Cathodoluminescence images showing the spot U-Pb ages of the analyzed zircons from (a) the Jinju Formation and (b and c) the Silla Conglomerate. Presented 206Pb/238U ages were calculated based upon 207Pbcorrected values for the zircons with ages younger than 1,000 Ma and 204Pb-corrected values for the older zircons. Circles (25 µm in diameter) mark analysis spots.	미상	SHRIMP	Cathodoluminescence images showing the spot U-Pb ages of the analyzed zircons from (a) the Jinju Formation and (b and c) the Silla Conglomerate. Presented 206Pb/238U ages were calculated based upon 207Pbcorrected values for the zircons with ages younger than 1,000 Ma and 204Pb-corrected values for the older zircons. Circles (25 µm in diameter) mark analysis spots.	경상분지 진주층 및 신라역암의 SHRIMP U-Pb 저어콘 연령분포 및 그 의미 (암석학회지 Petrol_v19n1p089)	36.900200 127.503306; 36.900200 128.634758; 34.664717 128.634758; 34.664717 127.503306
181	GY-9, Silla-14, KU-5	Traditional concordia and Tera-Wasserburg plots for the zircons analyzed from the Jinju Formation and the Silla Conglomerate.	미상	SHRIMP	Traditional concordia and Tera-Wasserburg plots for the zircons analyzed from the Jinju Formation and the Silla Conglomerate.	경상분지 진주층 및 신라역암의 SHRIMP U-Pb 저어콘 연령분포 및 그 의미 (암석학회지 Petrol_v19n1p089)	36.900200 127.503306; 36.900200 128.634758; 34.664717 128.634758; 34.664717 127.503306
182	GY-9, Silla-14, KU-5	Concordia ages obtained from the youngest populations of the zircons separated from the Jinju Formation (top) and the Silla Conglomerate (bottom).	미상	SHRIMP	Concordia ages obtained from the youngest populations of the zircons separated from the Jinju Formation (top) and the Silla Conglomerate (bottom).	경상분지 진주층 및 신라역암의 SHRIMP U-Pb 저어콘 연령분포 및 그 의미 (암석학회지 Petrol_v19n1p089)	36.900200 127.503306; 36.900200 128.634758; 34.664717 128.634758; 34.664717 127.503306
183	GY-9, Silla-14, KU-5	SHRIMP U-Pb zircon data of the Jinju Formation and Silla Conglomerate in Gyeongsang Basin, Korea.	미상	SHRIMP	SHRIMP U-Pb zircon data of the Jinju Formation and Silla Conglomerate in Gyeongsang Basin, Korea.	경상분지 진주층 및 신라역암의 SHRIMP U-Pb 저어콘 연령분포 및 그 의미 (암석학회지 Petrol_v19n1p089)	36.900200 127.503306; 36.900200 128.634758; 34.664717 128.634758; 34.664717 127.503306
184	E01~26, W01~28	Geologic map of Dokdo modified from Sohn(1995).	미상	XRF, ICP-MS	Geologic map of Dokdo modified from Sohn(1995).	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
185	E01~26, W01~28	Photomicrographs of breccia(crossed polar). (a) Skeletal clinopyroxene suggesting unstable environment during its growth. (b) Acicular clinopyroxene phenocryst. (c) Biotite phenocryst having trachytic texture in which microphenocrysts of K-felspar are aligned to flow. (d) Anorthoclase phenocryst having trachytic texture composed of small aligned K-feldspar lath. (e) Euhedral sanidine phenocryst. (f) Particular groundmass composed of feldspars represents extinction.	미상	XRF, ICP-MS	Photomicrographs of breccia(crossed polar). (a) Skeletal clinopyroxene suggesting unstable environment during its growth. (b) Acicular clinopyroxene phenocryst. (c) Biotite phenocryst having trachytic texture in which microphenocrysts of K-felspar are aligned to flow. (d) Anorthoclase phenocryst having trachytic texture composed of small aligned K-feldspar lath. (e) Euhedral sanidine phenocryst. (f) Particular groundmass composed of feldspars represents extinction.	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225

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186	E01~26, W01~28	Photomicrographs of breccia(crossed polar). (a) Plagioclase and clinopyroxene phynocryst showing cocystal. (b) Spherulitic texture of clinopyroxene. (c) Zoned K-feldspar twinned. (d) Glomerophyric texture in feldspathoid. (e) Biotite and feldspar phynocryst showing co-crystal fractionation in magma. (f) Carlsbad twin in clinopyroxene.	미상	XRF, ICP-MS	Photomicrographs of breccia(crossed polar). (a) Plagioclase and clinopyroxene phynocryst showing cocystal. (b) Spherulitic texture of clinopyroxene. (c) Zoned K-feldspar twinned. (d) Glomerophyric texture in feldspathoid. (e) Biotite and feldspar phynocryst showing co-crystal fractionation in magma. (f) Carlsbad twin in	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
187	E01~26, W01~28	Major element variation diagram of Dokdo volcanic rocks(Units are in ppm).	미상	XRF, ICP-MS	Major element variation diagram of Dokdo volcanic rocks(Units are in ppm).	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
188	E01~26, W01~28	Total alkalis vs. SiO ₂ (wt%) plotted for the igneous rocks in the study area after(Le Maitre et al., 1989).	미상	XRF, ICP-MS	Total alkalis vs. SiO ₂ (wt%) plotted for the igneous rocks in the study area after(Le Maitre et al., 1989).	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
189	E01~26, W01~28	Trace element variation diagrams of Dokdo volcanic rocks(Units are in ppm).	미상	XRF, ICP-MS	Trace element variation diagrams of Dokdo volcanic rocks(Units are in ppm).	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
190	E01~26, W01~28	Primitive mantle-normalized trace element patterns of selected Dokdo sample. Normalization values from Sun & McDonough(1990)	미상	XRF, ICP-MS	Primitive mantle-normalized trace element patterns of selected Dokdo sample. Normalization values from Sun & McDonough(1990)	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
191	E01~26, W01~28	Chondrite-normalized (Nakamura 1989) REE patterns of selected Dokdo sample.	미상	XRF, ICP-MS	Chondrite-normalized (Nakamura 1989) REE patterns of selected Dokdo sample.	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
192	E01~26, W01~28	Ba/Nb vs. La/Nb plot showing that the maficultramafic rocks are characterized by high Ba/Nb and La/Nb ratios, falling in the fields of arc volcanics and Archean granulites from eastern Hebei(data from Jahn and Zhang, 1984). Magmatic differentiation tends to increase both ratios. Data sources of for other fields : CC(continental crust) average (Taylor and McLennan, 1985; Condie, 1993), Clastic sediment average(Condie, 1993), MORB, OIB and Dupal OIB (Le Roux, 1986).	미상	XRF, ICP-MS	Ba/Nb vs. La/Nb plot showing that the maficultramafic rocks are characterized by high Ba/Nb and La/Nb ratios, falling in the fields of arc volcanics and Archean granulites from eastern Hebei(data from Jahn and Zhang, 1984). Magmatic differentiation tends to increase both ratios. Data sources of for other fields : CC(continental crust) average (Taylor and McLennan, 1985; Condie, 1993), Clastic sediment average(Condie, 1993), MORB, OIB and	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
193	E01~26, W01~28	Major element compositions of the volcaniclasts within the massive tuff breccia of Dokdo (Unit are in wt%).	미상	XRF, ICP-MS	Major element compositions of the volcaniclasts within the massive tuff breccia of Dokdo (Unit are in wt%).	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225
194	E01~26, W01~28	Trace element compositions of the volcaniclasts within the massive tuff breccia of Dokdo analysed by ICP-MS	미상	XRF, ICP-MS	Trace element compositions of the volcaniclasts within the massive tuff breccia of Dokdo analysed by ICP-MS	독도 괴상 응회질 각력암층에서 나타나는 화산암편의 암석학적 특성과 기원 (암석학회지 Petrol_v19n2p141)	37.248014 131.858225; 37.248014 131.873778; 37.236533 131.873778; 37.236533 131.858225

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195	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	Generalized geological map of the Shinyemi ore deposit. A; Fe deposit (Western ore body), B; Pb-Zn deposit (Eastern ore body).	미상	EPMA	Generalized geological map of the Shinyemi ore deposit. A; Fe deposit (Western ore body), B; Pb-Zn deposit (Eastern ore body).	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
196	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	Slab photos (A and C) and photomicrographs (B and D) illustrating various features of stage I (magnesian) skarn. (A) slab photo of the stage I skarn displaying the general texture with typical mineral assemblage of olivine + magnetite + clinopyroxene (cpx-I); (B) photomicrograph of A displaying the late magnetites surrounding the early olivine grains; (C) abundant stage II skarns (clinopyroxene veins) cross-cutting the stage I skarn and (D) photomicrograph of C displaying various clinopyroxene veins in stage II skarn. Clinopyroxenes (cpx-IIc) are re-injected along the clinopyroxene (cpx-IIb) veinlet. Abbreviations; Cpx = clinopyroxene, mt = magnetite, ol = olivine, po = pyrrhotite.	미상	EPMA	Slab photos (A and C) and photomicrographs (B and D) illustrating various features of stage I (magnesian) skarn. (A) slab photo of the stage I skarn displaying the general texture with typical mineral assemblage of olivine + magnetite + clinopyroxene (cpx-I); (B) photomicrograph of A displaying the late magnetites surrounding the early olivine grains; (C) abundant stage II skarns (clinopyroxene veins) cross-cutting the stage I skarn and (D) photomicrograph of C displaying various clinopyroxene veins in stage II skarn. Clinopyroxenes (cpx-IIc) are re-injected along the clinopyroxene (cpx-IIb) veinlet. Abbreviations; Cpx = clinopyroxene, mt = magnetite, ol =	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
197	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	Slab photos (A and C) and photomicrographs (B and D) depicting the features of stage II skarn in the lower part of Western Shinyemi ore body. (A) endoskarn; (B) photomicrograph of endoskarn with garnet and clinopyroxene. The early endoskarn, comprised of fine grained aggregate of garnet (grt-IIa) + clinopyroxene (cpx-IIa) + plagioclase, is surrounded by late exoskarn garnet (grt-IIb). The late stage clinopyroxene (cpx-IIc) occurs as an interstitial phase filling the space between the garnets; (C) slab photo showing numerous clinopyroxene-garnet veins in stage I skarn and (D) photomicrograph showing well developed oscillatory zoning in garnet (grt-IIb) with interstitial clinopyroxene (cpx-IIc) in the prograde skarn. Abbreviations; grt = garnet, pl = plagioclase. See Figure 3 for other abbreviations.	미상	EPMA	Slab photos (A and C) and photomicrographs (B and D) depicting the features of stage II skarn in the lower part of Western Shinyemi ore body. (A) endoskarn; (B) photomicrograph of endoskarn with garnet and clinopyroxene. The early endoskarn, comprised of fine grained aggregate of garnet (grt-IIa) + clinopyroxene (cpx-IIa) + plagioclase, is surrounded by late exoskarn garnet (grt-IIb). The late stage clinopyroxene (cpx-IIc) occurs as an interstitial phase filling the space between the garnets; (C) slab photo showing numerous clinopyroxene-garnet veins in stage I skarn and (D) photomicrograph showing well developed oscillatory zoning in garnet (grt-IIb) with interstitial clinopyroxene (cpx-IIc) in the prograde skarn. Abbreviations; grt = garnet, pl =	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
198	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	(A) Back scattered image of stage I (magnesian) skarn together with the compositions of olivine plotted in a ternary Te-Fo-Fa diagram. Olivine shows visible chemical zonation in terms Mg (dark areas) and Fe (light areas) and (B) Clinopyroxene compositions of stage I skarn plotted in the Jo-Di-Hd ternary diagram. The present data is also compared with those of Yang (1991; dark gray field) and Meinert (1992; light gray field). See Table 1 and Fig. 3 for abbreviations.	미상	EPMA	(A) Back scattered image of stage I (magnesian) skarn together with the compositions of olivine plotted in a ternary Te-Fo-Fa diagram. Olivine shows visible chemical zonation in terms Mg (dark areas) and Fe (light areas) and (B) Clinopyroxene compositions of stage I skarn plotted in the Jo-Di-Hd ternary diagram. The present data is also compared with those of Yang (1991; dark gray field) and Meinert (1992; light gray field). See Table 1 and Fig. 3 for abbreviations.	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
199	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	Chemical compositions of clinopyroxene and garnet of stage II (calcic) skarn plotted in the Jo-Di-Hd (A) and Pyr-Gr-Ad (B) ternary diagrams respectively. Note the variations in chemistry among the early and late clinopyroxenes and garnets. The hatched areas in clinopyroxene and garnet diagrams represent the Mo skarn and the gray field in garnet diagram corresponds to the Fe skarn of Meinert (1992). See Table 2 and Figure 3 for abbreviations.	미상	EPMA	Chemical compositions of clinopyroxene and garnet of stage II (calcic) skarn plotted in the Jo-Di-Hd (A) and Pyr-Gr-Ad (B) ternary diagrams respectively. Note the variations in chemistry among the early and late clinopyroxenes and garnets. The hatched areas in clinopyroxene and garnet diagrams represent the Mo skarn and the gray field in garnet diagram corresponds to the Fe skarn of Meinert (1992). See Table 2 and Figure 3 for abbreviations.	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
200	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	The schematic evolutionary path of the ore bearing fluids during various stages of mineralization in the lower part of Western Shinyemi ore body as deduced from the XCO ₂ versus Temperature diagram at 0.5 kbars fluid pressure and XCO ₂ < 1 (Harris and Einaudi, 1982). Abbreviations; amp = amphibole, brc = brucite, CC = calcite, mgs = magnesite, per = periclase, sps = serpentine, tlc = talc. See Table 1 and Fig. 2 for other abbreviations.	미상	EPMA	The schematic evolutionary path of the ore bearing fluids during various stages of mineralization in the lower part of Western Shinyemi ore body as deduced from the XCO ₂ versus Temperature diagram at 0.5 kbars fluid pressure and XCO ₂ < 1 (Harris and Einaudi, 1982). Abbreviations; amp = amphibole, brc = brucite, CC = calcite, mgs = magnesite, per = periclase, sps = serpentine, tlc = talc. See Table 1 and Fig. 2 for other abbreviations.	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
201	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	Representative EPMA analyses of olivine, clinopyroxene and phlogopite of stage I (magnesian) skarn in the lower part of Western Shinyemi ore body	미상	EPMA	Representative EPMA analyses of olivine, clinopyroxene and phlogopite of stage I (magnesian) skarn in the lower part of Western Shinyemi ore body	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
202	olivine, cpx-I, phlogopite, cpx-II, grt-II, amphibole	Representative EPMA analyses of clino pyroxene, garnet and amphibole of stage II (calcic) skarn in the lower part of Western Shinyemi ore body	미상	EPMA	Representative EPMA analyses of clino pyroxene, garnet and amphibole of stage II (calcic) skarn in the lower part of Western Shinyemi ore body	태백지역 신예미 서부과체 하부의 스카른 화작용 및 철-몰리브덴 광화작용 (한국광물학회지 Miner_v20n1p035)	37.193639 128.668633
203	04MV1/2/4/5, 04SS1, 04SG1	Gelological map of Jeju Island showing sample locations (after Lee, 1982).	미상	XRF, ICP-MS, EPMA	Gelological map of Jeju Island showing sample locations (after Lee, 1982).	제주도 알칼리 현무암에 포획된 반려암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
204	04MV1/2/4/5, 04SS1, 04SG1	The host basaltic rocks from Jeju Island. (a) The resorbed olivine phenocryst in a fine-grained groundmass. (b, c) glomerocrysts of pyroxene and plagioclase basalt with interstitial phlogopite. (d) Anhedral phlogopite crystal. (e, f) Kaersutite megacryst including clinopyroxene within.	미상	XRF, ICP-MS, EPMA	The host basaltic rocks from Jeju Island. (a) The resorbed olivine phenocryst in a fine-grained groundmass. (b, c) glomerocrysts of pyroxene and plagioclase basalt with interstitial phlogopite. (d) Anhedral phlogopite crystal. (e, f) Kaersutite megacryst including clinopyroxene within.	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
205	04MV1/2/4/5, 04SS1, 04SG1	Compositional plot of modal analysis of gabbroic xenolith	미상	XRF, ICP-MS, EPMA	Compositional plot of modal analysis of gabbroic xenolith	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
206	04MV1/2/4/5, 04SS1, 04SG1	Gabbroic xenoliths from Jeju Island. (a) An outcrop view showing abundant xenoliths floating in lava. (b) one of the xenoliths in Fig. 5a showing plagioclase megacryst with infiltration of basaltic liquid at the outcrop and (c) under the microscope.	미상	XRF, ICP-MS, EPMA	Gabbroic xenoliths from Jeju Island. (a) An outcrop view showing abundant xenoliths floating in lava. (b) one of the xenoliths in Fig. 5a showing plagioclase megacryst with infiltration of basaltic liquid at the outcrop and (c) under the	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
207	04MV1/2/4/5, 04SS1, 04SG1	Photomicrographs of (a, b) poikilitic-textured gabbroic norite xenolith. (c, d) intergranular texture. (e, f) intergranular texture showing secondary olivine along the primary crystal boundaries and small amphibole patches within the cpx grains. a, C, e = the crossed Nicols. b, d, f = open nicols. ol = olivine, am = amphibole, cpx = clinopyroxene, opx = orthopyroxene, pl = plagioclase, opq = opaque minerals.	미상	XRF, ICP-MS, EPMA	Photomicrographs of (a, b) poikilitic-textured gabbroic norite xenolith. (c, d) intergranular texture. (e, f) intergranular texture showing secondary olivine along the primary crystal boundaries and small amphibole patches within the cpx grains. a, C, e = the crossed Nicols. b, d, f = open nicols. ol = olivine, am = amphibole, cpx = clinopyroxene, opx = orthopyroxene, pl = plagioclase, opq = opaque minerals.	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
208	04MV1/2/4/5, 04SS1, 04SG1	SiO ₂ vs Na ₂ O+K ₂ O diagram indicating the boundaries between alkalic and sub-alkalic series after Le Bas & Streckeisen (1991) (= LBS) and Miyashiro (1978) (= MYS).	미상	XRF, ICP-MS, EPMA	SiO ₂ vs Na ₂ O+K ₂ O diagram indicating the boundaries between alkalic and sub-alkalic series after Le Bas & Streckeisen (1991) (= LBS) and Miyashiro (1978) (= MYS).	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
209	04MV1/2/4/5, 04SS1, 04SG1	Compositional plots for clinopyroxene and plagioclase in the host basalt, poikilitic xenolith and intergranular xenolith.	미상	XRF, ICP-MS, EPMA	Compositional plots for clinopyroxene and plagioclase in the host basalt, poikilitic xenolith and intergranular xenolith.	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
210	04MV1/2/4/5, 04SS1, 04SG1	Modal compositions (in vol%) of gabbroic xenoliths in basalt from Jeju island	미상	XRF, ICP-MS, EPMA	Modal compositions (in vol%) of gabbroic xenoliths in basalt from Jeju island	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
211	04MV1/2/4/5, 04SS1, 04SG1	Major and trace element compositions of the host basalt	미상	XRF, ICP-MS, EPMA	Major and trace element compositions of the host basalt	제주도 알칼리 현무암에 포획된 반러암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
212	04MV1/2/4/5, 04SS1, 04SG1	Average compositions of phenocryst from the host basaltic rocks	미상	XRF, ICP-MS, EPMA	Average compositions of phenocryst from the host basaltic rocks	제주도 알칼리 현무암에 포획된 반려암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
213	04MV1/2/4/5, 04SS1, 04SG1	Average compositions of OPX of the gabbroic xenoliths from Jeju basalts	미상	XRF, ICP-MS, EPMA	Average compositions of OPX of the gabbroic xenoliths from Jeju basalts	제주도 알칼리 현무암에 포획된 반려암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
214	04MV1/2/4/5, 04SS1, 04SG1	Average compositions of CPX of the gabbroic xenoliths from Jeju basalts	미상	XRF, ICP-MS, EPMA	Average compositions of CPX of the gabbroic xenoliths from Jeju basalts	제주도 알칼리 현무암에 포획된 반려암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
215	04MV1/2/4/5, 04SS1, 04SG1	Average compositions of plagioclase of the gabbroic xenoliths from Jeju basalts	미상	XRF, ICP-MS, EPMA	Average compositions of plagioclase of the gabbroic xenoliths from Jeju basalts	제주도 알칼리 현무암에 포획된 반려암질 포획암 (한국광물학회지 Miner_v20n2p103)	33.611800 126.083903; 33.611800 127.059736; 33.100608 127.059736; 33.100608 126.083903
216	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	General geological map of the Gajok gold-silver deposit. The location (A) and area map (B) of the Gajok deposit are shown insetted map. GM = Gyeonggi Massif, OB = Okcheon Belt, YM = Yeongnam Massif, GB = Gyeongsang Basin.	미상	XRD, 현미경조사	General geological map of the Gajok gold-silver deposit. The location (A) and area map (B) of the Gajok deposit are shown insetted map. GM = Gyeonggi Massif, OB = Okcheon Belt, YM = Yeongnam Massif, GB = Gyeongsang Basin.	홍천 광화대, 가족 광상의 금-은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
217	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	XRD patterns and photomicrographs of each alteration part. Phyllic alteration extends into the wall rock laterally away from veins. XRD peak intensities of microcline (open triangle) as primary mineral decrease with increasing peaks of sericite (solid triangle) in strongly altered zone. Note that complete replacement of microcline phenocrysts by sericite, producing pseudomprphs with recognizable crystal shapes. Abbreviation; ab = albite, bt = biotite, chl = chlorite, mc = microcline, qtz = quartz, ser = sericite.	미상	XRD, 현미경조사	XRD patterns and photomicrographs of each alteration part. Phyllic alteration extends into the wall rock laterally away from veins. XRD peak intensities of microcline (open triangle) as primary mineral decrease with increasing peaks of sericite (solid triangle) in strongly altered zone. Note that complete replacement of microcline phenocrysts by sericite, producing pseudomprphs with recognizable crystal shapes. Abbreviation; ab = albite, bt = biotite, chl = chlorite, mc = microcline, qtz = quartz, ser = sericite.	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
218	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Generalized paragenetic sequence of minerals from the each veins of the Gajok gold-silver deposit.	미상	XRD, 현미경조사	Generalized paragenetic sequence of minerals from the each veins of the Gajok gold-silver deposit.	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료
시료등록
메타데이터
목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
219	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Photographs showing ore minerals in both stage III and IV from the Gajok deposit. A; electrum in the middle assemblage as inclusion in pyrite from stage III, B; great amount of electrum in the middle assemblage as the free gold. C; electrum of late assemblage with argentite and native silver in stage IV, D; electrum showing the textural feature of Au-rich electrum overgrown by Ag-rich electrum in stage IV. Scale bars = 0.2 mm. ag = native silver, ar = argentite, el = electrum, py = pyrite.	미상	XRD, 현미경조사	Photographs showing ore minerals in both stage III and IV from the Gajok deposit. A; electrum in the middle assemblage as inclusion in pyrite from stage III, B; great amount of electrum in the middle assemblage as the free gold. C; electrum of late assemblage with argentite and native silver in stage IV, D; electrum showing the textural feature of Au-rich electrum overgrown by Ag-rich electrum in stage IV. Scale bars = 0.2 mm. ag = native silver, ar = argentite, el = electrum, py = pyrite.	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
220	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Histogram showing Au contents in electrum (A) and FeS contents in sphalerite (B). Note Au and FeS contents in middle assemblage from each stages are relatively hihger.	미상	XRD, 현미경조사	Histogram showing Au contents in electrum (A) and FeS contents in sphalerite (B). Note Au and FeS contents in middle assemblage from each stages are relatively hihger.	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
221	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Diagram showing homogenization temperature vs. salinity of fluid inclusions in quartz.	미상	XRD, 현미경조사	Diagram showing homogenization temperature vs. salinity of fluid inclusions in quartz.	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
222	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Schematic model showing the compositional variation of electrum, sphalerite and Ag-bearing minerals in relation to sulfur fugacity, temperature and the evolution of ore fluids during mineralization at the Gajok deposit. Hatched and gray areas show the middle assemblages and late assemblages, respectively. The thick line with broken line indicates the homogenization temperatures from the Gajok deposit. Nag = Atomic fraction of Ag in electrum. Xres = mole fraction of FeS in sphalerite. Thermochemical data were taken from Barton and Toulmin (1964) and Barton and Skinner (1979).	미상	XRD, 현미경조사	Schematic model showing the compositional variation of electrum, sphalerite and Ag-bearing minerals in relation to sulfur fugacity, temperature and the evolution of ore fluids during mineralization at the Gajok deposit. Hatched and gray areas show the middle assemblages and late assemblages, respectively. The thick line with broken line indicates the homogenization temperatures from the Gajok deposit. Nag = Atomic fraction of Ag in electrum. Xres = mole fraction of FeS in sphalerite. Thermochemical data were taken from Barton and Toulmin (1964) and Barton and Skinner (1979).	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
223	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Hydrogen versus oxygen isotope diagram displaying the stable isotope compositions of hydrothermal fluids from the Gajok deposit.	미상	XRD, 현미경조사	Hydrogen versus oxygen isotope diagram displaying the stable isotope compositions of hydrothermal fluids from the Gajok deposit.	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
224	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Fugacity of sulfur versus fugacity of oxygen diagram at 250 °C (A) and 150°C (B) relevant to gold-depositing fluids of the Gajok deposit (hatched area). Thick solid lines indicate stability fields of minerals in the system Fe-O-S; thin lines, total concentration of H ₂ S (aq), Equilibrium constants used for constraining reactions are from SURCRT92 (Johnson et al., 1992).	미상	XRD, 현미경조사	Fugacity of sulfur versus fugacity of oxygen diagram at 250 °C (A) and 150°C (B) relevant to gold-depositing fluids of the Gajok deposit (hatched area). Thick solid lines indicate stability fields of minerals in the system Fe-O-S; thin lines, total concentration of H ₂ S (aq), Equilibrium constants used for constraining reactions are from SURCRT92 (Johnson et al., 1992).	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
225	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Isothermal oxygen fugacity versus pH showing the solubility of Au(HS) ₂ . Hatched areas stand for isothermal fluid conditions at the Gajok deposit. The solubility of Au(HS) ₂ calculated from Seward (1973) and Seward (1984). Log aK [*] calculated from Ellis and Mahon (1967) and Fournier and Truesdell (1973). Equilibrium constants used for constraining reactions are from SURCRT92 (Johnson et al., 1992).	미상	XRD, 현미경조사	Isothermal oxygen fugacity versus pH showing the solubility of Au(HS) ₂ . Hatched areas stand for isothermal fluid conditions at the Gajok deposit. The solubility of Au(HS) ₂ calculated from Seward (1973) and Seward (1984). Log aK [*] calculated from Ellis and Mahon (1967) and Fournier and Truesdell (1973). Equilibrium constants used for constraining reactions are from SURCRT92 (Johnson et al., 1992).	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
226	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Representative chemical compositions of electrum from the Gajok gold-silver deposit	미상	XRD, 현미경조사	Representative chemical compositions of electrum from the Gajok gold-silver deposit	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
227	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Chemical composition of sphalerite from the Gajok gold-silver deposit	미상	XRD, 현미경조사	Chemical composition of sphalerite from the Gajok gold-silver deposit	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
228	kk202624-Z-B-1-33/34, kk20624-Z-B-1-45/46/47/48, kk202624-Z-B-3-35, kk20624-8-B-36/37/69, kk20624-34-1-1-1/2/9/17/18/19/20/24/25/24/25, kk20624-34-2-1-7/10, kk20624-32-72/74, kk20624-34-1-1-3/16, kk20624-34-1-2-21/23, kk20246-34-1-3-26, kk20624-34-1-3-26, kk20624-34-2-2-4, kk20624-34-2-2-5	Oxygen and hydrogen isotope data from the Gajok gold-silver veins	미상	XRD, 현미경조사	Oxygen and hydrogen isotope data from the Gajok gold-silver veins	홍천 광화대, 가죽 광상의 금·은 광화작용 (한국광물학회지 Miner_v21n1p001)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
229	A-1~8/G	Geological map of the Bonghwa area (modified from Kim et al., 1963).	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	Geological map of the Bonghwa area (modified from Kim et al., 1963).	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
230	A-1~8/G	X-ray diffraction patterns of the calc-silicate rocks.	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	X-ray diffraction patterns of the calc-silicate rocks.	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
231	A-1~8/G	X-ray diffraction patterns of the calc-silicate rocks.	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	X-ray diffraction patterns of the calc-silicate rocks.	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
232	A-1~8/G	X-ray diffraction patterns of the serpentine mineral heated at various temperatures for one hour.	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	X-ray diffraction patterns of the serpentine mineral heated at various temperatures for one hour.	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
233	A-1~8/G	FT-IR curve of the serpentine sample.	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	FT-IR curve of the serpentine sample.	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
234	A-1~8/G	Photomicrographs of the calc-silicate rocks. A, B and C: Sample A-3, D: Sample A-7. Se: Serpentine, Am: Amphibole, Ca: Calcite, Di: Diopside.	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	Photomicrographs of the calc-silicate rocks. A, B and C: Sample A-3, D: Sample A-7. Se: Serpentine, Am: Amphibole, Ca: Calcite, Di: Diopside.	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
235	A-1~8/G	SEM images of serpentine samples. (A), (B): Images of bulk sample. (C), (D): Images of < 2 µm fractions.	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	SEM images of serpentine samples. (A), (B): Images of bulk sample. (C), (D): Images of < 2 µm fractions.	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
236	A-1~8/G	The mineral assemblages of the calc-silicate rocks	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	The mineral assemblages of the calc-silicate rocks	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
237	A-1~8/G	XRD data of a serpentine bearing sample (A-G)	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	XRD data of a serpentine bearing sample (A-G)	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
238	A-1~8/G	Chemical composition of the calc-silicate rocks	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	Chemical composition of the calc-silicate rocks	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
239	A-1~8/G	Trace and rare earth element contents of the calc-silicate rocks	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	Trace and rare earth element contents of the calc-silicate rocks	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
240	A-1~8/G	Electron microprobe analysis of serpentine	미상	XRD, XRF, FT-IR, SEM, EPMA, ICP-MS, ICP-AES	Electron microprobe analysis of serpentine	경북 봉화지역의 석회규산염층에서 산출되는 사문석광물의 산상 및 광물학적 특성 (한국광물학회지 Miner_v21n1p085)	36.962722 129.016047
241	06SS1~3	Geological map of the Jeju Island showing (a) the sampling site for the fine-grained and foliated mantle peridotite xenoliths (after Lee, 1982) and (b) a simplified vertical section of Jeju Island.	미상	EPMA	Geological map of the Jeju Island showing (a) the sampling site for the fine-grained and foliated mantle peridotite xenoliths (after Lee, 1982) and (b) a simplified vertical section of Jeju	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744
242	06SS1~3	A photograph of fine-grained and foliated mantle xenoliths, spinel lherzolite showing the macroscopic foliation and lineation and the vertical plane to be cut for the thin sections.	미상	EPMA	A photograph of fine-grained and foliated mantle xenoliths, spinel lherzolite showing the macroscopic foliation and lineation and the vertical plane to be cut for the thin sections.	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
243	06SS1~3	Photomicrographs of textural features showing lineation and compositional layers in the studied xenoliths. (a, b) fine-grained and foliated mosaic to tabular equigranular texture showing the distinctive lineation. (c) and (d) are enlarged pictures of the above (a) showing elongated spinel aggregates with impregnation of basaltic melt. (e, f) the alternate olivine-rich (light part) and pyroxene-rich (dark part) layers showing compositional layering. (a, c, e) = plane-polarized light images, (b, d, f) = crossed-polarized light images. ol = olivine, Opx = orthopyroxene, Cpx = clinopyroxene, sp = spinel, pl = plagioclase.	미상	EPMA	Photomicrographs of textural features showing lineation and compositional layers in the studied xenoliths. (a, b) fine-grained and foliated mosaic to tabular equigranular texture showing the distinctive lineation. (c) and (d) are enlarged pictures of the above (a) showing elongated spinel aggregates with impregnation of basaltic melt. (e, f) the alternate olivine-rich (light part) and pyroxene-rich (dark part) layers showing compositional layering. (a, c, e) = plane-polarized light images, (b, d, f) = crossed-polarized light images. ol = olivine, Opx = orthopyroxene, Cpx = clinopyroxene, sp = spinel, pl =	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국 광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744
244	06SS1~3	Photomicrographs of textural features in the studied xenoliths. (a, b) large orthopyroxene porphyroclast with coarse-spaced kink banding and kinked clinopyroxene exsolution lamella surrounded by recrystallized grains showing lobated grain boundary. (c) mosaic to weakly stretched grains with straight curvilinear grain boundary with impregnation of basaltic melt. (d) a melt pocket indicated by dotted line showing straight to gently curved grain boundaries and triple junctions. (e) left-over spinel grains contacting with olivine. (f) a microstructure showing the movement direction of a migrating grain boundary (after Passchier and Trouw, 1996) explaining spinel grains in picture (g) spinel inclusions in olivine and orthopyroxene. (h) GBM (grain boundary migration) recrystallization explaining spinel inclusions in picture "g" (after Passchier and Trouw, 1996). (a, e) = plane-polarized light images, (b, c, d, e, g) = crossed-polarized light images. ol = olivine, opx = orthopyroxene, Cpx = clinopyroxene, sp = spinel, pl = plagioclase.	미상	EPMA	Photomicrographs of textural features in the studied xenoliths. (a, b) large orthopyroxene porphyroclast with coarse-spaced kink banding and kinked clinopyroxene exsolution lamella surrounded by recrystallized grains showing lobated grain boundary. (c) mosaic to weakly stretched grains with straight curvilinear grain boundary with impregnation of basaltic melt. (d) a melt pocket indicated by dotted line showing straight to gently curved grain boundaries and triple junctions. (e) left-over spinel grains contacting with olivine. (f) a microstructure showing the movement direction of a migrating grain boundary (after Passchier and Trouw, 1996) explaining spinel grains in picture (g) spinel inclusions in olivine and orthopyroxene. (h) GBM (grain boundary migration) recrystallization explaining spinel inclusions in picture "g" (after Passchier and Trouw, 1996). (a, e) = plane-polarized light images, (b, c, d, e, g) = crossed-polarized light images. ol = olivine, opx = orthopyroxene, Cpx = clinopyroxene, sp	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국 광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744

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245	06SS1~3	Correlation diagram for the studied mantle xenoliths. (a) variation in cation numbers of Na VS. al in clinopyroxenes in the xenoliths studied. (b) relationship between the Fo (forsterite) content of olivines and in spinels in the xenoliths studied in the OSMA diagram (Arai, 1994). OSMA: olivine-spinel mantle array.	미상	EPMA	Correlation diagram for the studied mantle xenoliths. (a) variation in cation numbers of Na VS. al in clinopyroxenes in the xenoliths studied. (b) relationship between the Fo (forsterite) content of olivines and in spinels in the xenoliths studied in the OSMA diagram (Arai, 1994). OSMA: olivine-spinel mantle	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744
246	06SS1~3	Modal composition (in xz and yz sections) of the studied samples	미상	EPMA	Modal composition (in xz and yz sections) of the studied samples	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744
247	06SS1~3	Major element composition (wt%) of the rock forming minerals in the studied peridotite xenoliths	미상	EPMA	Major element composition (wt%) of the rock forming minerals in the studied peridotite xenoliths	제주도 현무암에 포획된 세립질 맨틀 페리도타이트 포획암의 조직적 특성 (한국광물학회지 Miner_v22n1p001)	33.397875 126.847744; 33.397875 126.885897; 33.371097 126.885897; 33.371097 126.847744
248	1~8	Microscopic occurrence of motukoreaite and quintinite-3T. (a) Photomicrograph of a slab of volcanoclastic sediment of the Sinyangri Formation showing white fine aggregates of layered double hydroxides and altered glassy basaltic fragments of yellow-brown color. (b) Back-scattered electron (BSE) image of a thin section showing the fine aggregates of layered double hydroxides cementing altered glassy basaltic fragments. (c) Globular and botryoidal aggregates of layered double hydroxides. BSE images of a thin section. (d) Quintinite-3T aggregates with outer overgrowth of motukoreaite plates in globules. BSE images of a thin section. (e) Transmission electron micrograph of a platy motukoreaite particle. (f) Transmission electron micrograph of a platy quintinite-3T particle.	미상	XRD, SEM EPMA	Microscopic occurrence of motukoreaite and quintinite-3T. (a) Photomicrograph of a slab of volcanoclastic sediment of the Sinyangri Formation showing white fine aggregates of layered double hydroxides and altered glassy basaltic fragments of yellow-brown color. (b) Back-scattered electron (BSE) image of a thin section showing the fine aggregates of layered double hydroxides cementing altered glassy basaltic fragments. (c) Globular and botryoidal aggregates of layered double hydroxides. BSE images of a thin section. (d) Quintinite-3T aggregates with outer overgrowth of motukoreaite plates in globules. BSE images of a thin section. (e) Transmission electron micrograph of a platy motukoreaite particle. (f) Transmission electron micrograph of a	제주도 신양리층에서 산출하는 Motukoreaite와 Quintinite (한국광물학회지 Miner_v22n4p307)	33.465142 126.934214; 33.465142 126.946072; 33.453150 126.946072; 33.453150 126.934214
249	1~8	X-ray diffraction pattern of layered double hydroxides in the Sinyangri Formation.	미상	XRD, SEM EPMA	X-ray diffraction pattern of layered double hydroxides in the Sinyangri Formation.	제주도 신양리층에서 산출하는 Motukoreaite와 Quintinite (한국광물학회지 Miner_v22n4p307)	33.465142 126.934214; 33.465142 126.946072; 33.453150 126.946072; 33.453150 126.934214
250	1~8	X-ray powder diffraction data of quintinite-3T and motukoreaite	미상	XRD, SEM EPMA	X-ray powder diffraction data of quintinite-3T and motukoreaite	제주도 신양리층에서 산출하는 Motukoreaite와 Quintinite (한국광물학회지 Miner_v22n4p307)	33.465142 126.934214; 33.465142 126.946072; 33.453150 126.946072; 33.453150 126.934214
251	1~8	Electron microprobe analysis of motukoreaite from Jeju island	미상	XRD, SEM EPMA	Electron microprobe analysis of motukoreaite from Jeju island	제주도 신양리층에서 산출하는 Motukoreaite와 Quintinite (한국광물학회지 Miner_v22n4p307)	33.465142 126.934214; 33.465142 126.946072; 33.453150 126.946072; 33.453150 126.934214

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252	1~8	Electron microprobe analysis of quintinite-3T from Jeju island	미상	XRD, SEM EPMA	Electron microprobe analysis of quintinite-3T from Jeju island	제주도 신양리층에서 산출하는 Motukoreaite와 Quintinite (한국광물학회지 Miner_v22n4p307)	33.465142 126.934214; 33.465142 126.946072; 33.453150 126.946072; 33.453150 126.934214
253	JA-1~9, TS-1~6, 03KS-8~20	General geologic map of the study area (compiled from Sancheong and Danseong 1:50,000 Geological Sheets).	미상	XRF, ICP	General geologic map of the study area (compiled from Sancheong and Danseong 1:50,000 Geological Sheets).	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
254	JA-1~9, TS-1~6, 03KS-8~20	Sub-detailed geologic map showing surveyed mining claim area.	미상	XRF, ICP	Sub-detailed geologic map showing surveyed mining claim area.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
255	JA-1~9, TS-1~6, 03KS-8~20	Upper figure showing the distribution and occurrence of titanium ore body in surface and underground, and lower figure showing the intensity of radioactivity in underground in the Weolheongri mine area.	미상	XRF, ICP	Upper figure showing the distribution and occurrence of titanium ore body in surface and underground, and lower figure showing the intensity of radioactivity in underground in the Weolheongri mine area.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
256	JA-1~9, TS-1~6, 03KS-8~20	TiO ₂ vs. Fe ₂ O ₃ , P ₂ O ₅ , La, Ce, Nb diagram and P ₂ O ₅ vs. La, Ce and Nb diagram for titanium ore from the Weolheongri mine area.	미상	XRF, ICP	TiO ₂ vs. Fe ₂ O ₃ , P ₂ O ₅ , La, Ce, Nb diagram and P ₂ O ₅ vs. La, Ce and Nb diagram for titanium ore from the Weolheongri mine area.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
257	JA-1~9, TS-1~6, 03KS-8~20	Geology and distribution map showing Duyangri titanium mineralized area distributed in the Danseong-gun.	미상	XRF, ICP	Geology and distribution map showing Duyangri titanium mineralized area distributed in the Danseong-gun.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
258	JA-1~9, TS-1~6, 03KS-8~20	Photographs and microphotographs of occurring rocks in the study area. A: Outcrop of leucocratic gneiss; B: Microphotographs of leucocratic gneiss; C: Microphotographs of granitic gneiss; D: Microphotographs of hornblende gneiss; E: Microphotographs of basic dike; F: Outcrop of foliated anorthosite; G: Layered anorthosite; H and 1: Microphotographs of anorthosite; J: Microphotographs of gabbroic anorthosite; K: Sheared and layered anorthosite of Jayangri mineralized area; L: Sheared and layered anorthosite of Taeso mineralized area; M and N: Reflected microphotographs of titanium ores in Taeso mineralized area. Abbreviations: Q: Quartz; Pla: Plagioclase; Gt: Garnet; Ch: Chlorite; Hb: Hornblende; Bt: Biotite; Amp: Amphibole; Ilm: Ilmenite; Mus: Muscovite.	미상	XRF, ICP	Photographs and microphotographs of occurring rocks in the study area. A: Outcrop of leucocratic gneiss; B: Microphotographs of leucocratic gneiss; C: Microphotographs of granitic gneiss; D: Microphotographs of hornblende gneiss; E: Microphotographs of basic dike; F: Outcrop of foliated anorthosite; G: Layered anorthosite; H and 1: Microphotographs of anorthosite; J: Microphotographs of gabbroic anorthosite; K: Sheared and layered anorthosite of Jayangri mineralized area; L: Sheared and layered anorthosite of Taeso mineralized area; M and N: Reflected microphotographs of titanium ores in Taeso mineralized area. Abbreviations: Q: Quartz; Pla: Plagioclase; Gt: Garnet; Ch: Chlorite; Hb: Hornblende; Bt: Biotite; Amp: Amphibole; Ilm: Ilmenite; Mus: Muscovite.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667

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259	JA-1~9, TS-1~6, 03KS-8~20	Road logging result of the Jayangri titanium ore body distributed in the Duyangri mineralized area.	미상	XRF, ICP	Road logging result of the Jayangri titanium ore body distributed in the Duyangri mineralized area.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
260	JA-1~9, TS-1~6, 03KS-8~20	Columnar section of the Taeso titanium ore body distributed in the Duyangri mineralized area.	미상	XRF, ICP	Columnar section of the Taeso titanium ore body distributed in the Duyangri mineralized area.	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
261	JA-1~9, TS-1~6, 03KS-8~20	Fe2O3, TiO2, P2O5, Ce, La, Nb and Ta contents of titanium ores in the Weolhwaengri	미상	XRF, ICP	Fe2O3, TiO2, P2O5, Ce, La, Nb and Ta contents of titanium ores in the Weolhwaengri	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
262	JA-1~9, TS-1~6, 03KS-8~20	Major oxide compositions of the titanium ores in the Jayangri and Taeso ore bodies of the Duyangri mineralized area (unit: wt%)	미상	XRF, ICP	Major oxide compositions of the titanium ores in the Jayangri and Taeso ore bodies of the Duyangri mineralized area (unit: wt%)	하동-산청 티탄철석 광상의 광체배태양상 (한국광물학회지 Miner_v23n1p025)	35.594444 127.591667; 35.594444 128.116667; 35.050000 128.116667; 35.050000 127.591667
263	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	Locations of f tuff outcrops and drill cores for mineralogical analysis. Geologic map from Sohn et al. (2008).	미상	XRD, SEM, EPMA	Locations of f tuff outcrops and drill cores for mineralogical analysis. Geologic map from Sohn et al. (2008).	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556
264	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	X-ray diffraction patterns of altered tuffs and Jongdal drill core.	미상	XRD, SEM, EPMA	X-ray diffraction patterns of altered tuffs and Jongdal drill core.	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556
265	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	X-ray diffraction patterns of altered volcanoclastic sediments from drill cores at Sagye and landfill sites.	미상	XRD, SEM, EPMA	X-ray diffraction patterns of altered volcanoclastic sediments from drill cores at Sagye and landfill sites.	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
266	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	Back-scattered electron images of thin sections of altered tuffs. (a), (b), and (c) Dangsanbong tuff. (d), (e), and (f) Yongmeori tuff.	미상	XRD, SEM, EPMA	Back-scattered electron images of thin sections of altered tuffs. (a), (b), and (c) Dangsanbong tuff. (d), (e), and (f) Yongmeori tuff.	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556
267	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	Back-scattered electron images of thin sections of altered volcaniclastic sediments of Seoguipo Formation. (a) and (b) Jondal core. (c) and (d) Landfill site core. (e) and (f) Sagye core.	미상	XRD, SEM, EPMA	Back-scattered electron images of thin sections of altered volcaniclastic sediments of Seoguipo Formation. (a) and (b) Jondal core. (c) and (d) Landfill site core. (e) and (f) Sagye core.	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556
268	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	Electron microprobe analyses of fresh glass and zeolites from the outcrops of Dangsanbong tuff cone and Yongmeori tuff ring	미상	XRD, SEM, EPMA	Electron microprobe analyses of fresh glass and zeolites from the outcrops of Dangsanbong tuff cone and Yongmeori tuff ring	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556
269	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	Electron microprobe analyses of zeolites from the core located at Jongdal-ri, Jeju	미상	XRD, SEM, EPMA	Electron microprobe analyses of zeolites from the core located at Jongdal-ri, Jeju	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
270	DS1 230/226/227/228, YMB 201/202/204/206/20 3/207 Jondal core 17/24/25/1/2/7/10/1 4/26/21/19/20/22/2 3, SA3 16/19/21/23/24/27/ 29 ME13 25/26/27	Electron microprobe analyses of fresh glass zeolites from the cores located at Sagye-ri and landfill site, Jeju	미상	XRD, SEM, EPMA	Electron microprobe analyses of fresh glass zeolites from the cores located at Sagye-ri and landfill site, Jeju	제주도 화산쇄설암의 불석광물 (한국광물학회지 Miner_v23n1p039)	33.234694 126.308778, 33.290806 126.413250, 33.451889 126.484556
271	A1~4, B1~4	Outcrop of yellow-brown precipitates in the Majeonri Formation of the Okcheon Belt, Boksu, Geumsan.	미상	SEM, EDS, EPMA, XRD, TEM	Outcrop of yellow-brown precipitates in the Majeonri Formation of the Okcheon Belt, Boksu, Geumsan.	금산군 마전리층 열수광화대의 표성 함비소 Schwertmanite (한국광물학회지 Miner_v23n1p093)	36.176778 127.423111
272	A1~4, B1~4	Weathering of sulfides to Fe sulfates. Back-scattered electron image of thin section. (a) quartz-pyrite vein. (b) Pyrite dissolution and Fe-sulfate precipitation. (c) Schwertmannite coatings and selective dissolution of calcite in the underlying rock. Labels indicate the positions of electron microprobe chemical analyses in Table 1. (d) As-bearing schwertmannite. Image magnified from c. (e) EDS pattern of As-bearing schwertmannite in d. (f) Calcite-arsenopyrite vein.	미상	SEM, EDS, EPMA, XRD, TEM	Weathering of sulfides to Fe sulfates. Back-scattered electron image of thin section. (a) quartz-pyrite vein. (b) Pyrite dissolution and Fe-sulfate precipitation. (c) Schwertmannite coatings and selective dissolution of calcite in the underlying rock. Labels indicate the positions of electron microprobe chemical analyses in Table 1. (d) As-bearing schwertmannite. Image magnified from c. (e) EDS pattern of As-bearing schwertmannite in d. (f) Calcite-	금산군 마전리층 열수광화대의 표성 함비소 Schwertmanite (한국광물학회지 Miner_v23n1p093)	36.176778 127.423111
273	A1~4, B1~4	Morphology of schwertmannite. (a) Globular aggregates of schwertmannite. SEM. (b) Short nanofibers of schwertmannite of the globules magnified from a.(c), (d) TEM image of the aggregates of schwertmannite nanofibers. (e) Selected area electron diffraction pattern of the fibrous aggregates in d showing ring patterns of schwertmannite. Unit in A.	미상	SEM, EDS, EPMA, XRD, TEM	Morphology of schwertmannite. (a) Globular aggregates of schwertmannite. SEM. (b) Short nanofibers of schwertmannite of the globules magnified from a.(c), (d) TEM image of the aggregates of schwertmannite nanofibers. (e) Selected area electron diffraction pattern of the fibrous aggregates in d showing ring patterns of schwertmannite. Unit in A.	금산군 마전리층 열수광화대의 표성 함비소 Schwertmanite (한국광물학회지 Miner_v23n1p093)	36.176778 127.423111
274	A1~4, B1~4	X-ray powder diffraction pattern of yellow-brown precipitates.	미상	SEM, EDS, EPMA, XRD, TEM	X-ray powder diffraction pattern of yellow-brown precipitates.	금산군 마전리층 열수광화대의 표성 함비소 Schwertmanite (한국광물학회지 Miner_v23n1p093)	36.176778 127.423111
275	A1~4, B1~4	Electron microprobe analysis of yellow-brown precipitates	미상	SEM, EDS, EPMA, XRD, TEM	Electron microprobe analysis of yellow-brown precipitates	금산군 마전리층 열수광화대의 표성 함비소 Schwertmanite (한국광물학회지 Miner_v23n1p093)	36.176778 127.423111
276	2/5/6/7/9/10/13/14/ 15/8/11/12/220/221 /222/217/219/215/2 16/218	Geologic map of Jeju Island (Jeong et al., 2010) and location of Udo Island.	미상	SEM, EDS, EPMA, XRD, TEM	Geologic map of Jeju Island (Jeong et al., 2010) and location of Udo Island.	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956
277	2/5/6/7/9/10/13/14/ 15/8/11/12/220/221 /222/217/219/215/2 16/218	X-ray diffraction patterns of the altered Udo tuff (sample Udo-A). Sm: smectite, O: olivine, Pl: plagioclase, Px: pyroxene, Mt: magnetite.	미상	SEM, EDS, EPMA, XRD, TEM	X-ray diffraction patterns of the altered Udo tuff (sample Udo-A). Sm: smectite, O: olivine, Pl: plagioclase, Px: pyroxene, Mt: magnetite.	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
278	2/5/6/7/9/10/13/14/15/8/11/12/220/221/222/217/219/215/216/218	SEM-BSE images of almost fresh tuff (sample Udo-C1). BSE images of thin section. (a) Poorly-sorted ash particles. Fine particles were concentrated around large sandy particle. (b) Fresh glass of the ash particles including plagioclase and pyroxene crystals. Image magnified from the box in a. Black = epoxy.	미상	SEM, EDS, EPMA, XRD, TEM	SEM-BSE images of almost fresh tuff (sample Udo-C1). BSE images of thin section. (a) Poorly-sorted ash particles. Fine particles were concentrated around large sandy particle. (b) Fresh glass of the ash particles including plagioclase and pyroxene crystals. Image magnified from the box in a. Black = epoxy.	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956
279	2/5/6/7/9/10/13/14/15/8/11/12/220/221/222/217/219/215/216/218	SEM-BSE images of altered tuff (sample Udo-A). BSE images of thin section. (a) Ash particles with glass core and alteration rinds. (b) Colloform smectite aggregates lining and bridging the ash particles. (c) Glass alteration around bubbles showing colloform compositional bands. (d) Leached glass at the alteration front. Black = epoxy. Images in b,c, and d were magnified from the boxes in a.	미상	SEM, EDS, EPMA, XRD, TEM	SEM-BSE images of altered tuff (sample Udo-A). BSE images of thin section. (a) Ash particles with glass core and alteration rinds. (b) Colloform smectite aggregates lining and bridging the ash particles. (c) Glass alteration around bubbles showing colloform compositional bands. (d) Leached glass at the alteration front. Black = epoxy. Images in b,c, and d were magnified	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956
280	2/5/6/7/9/10/13/14/15/8/11/12/220/221/222/217/219/215/216/218	SEM-SE images of altered tuff (sample Udo-A). Original sample. (a), (b), (c), and (d) Occurrence of pore-lining smectite honeycomb and (Fe,Ti)-rich amorphous silicate nanogranules. (e) and (f) Porous leached glass at the alteration front along the bubble walls.	미상	SEM, EDS, EPMA, XRD, TEM	SEM-SE images of altered tuff (sample Udo-A). Original sample. (a), (b), (c), and (d) Occurrence of pore-lining smectite honeycomb and (Fe,Ti)-rich amorphous silicate nanogranules. (e) and (f) Porous leached glass at the alteration front along the bubble walls.	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956
281	2/5/6/7/9/10/13/14/15/8/11/12/220/221/222/217/219/215/216/218	TEM images of altered tuff (ion-milled section of sample Udo-A). (a) Porous leached glass. (b) Smectite and amorphous domains in the alteration rind replacing glass. Numbers indicate analysis positions shown in Table 1. (c) Mixture of randomly-oriented smectite and (Fe,Ti)-rich amorphous nanogranules. Number indicates analysis position shown in Table 1. (d) Lattice fringe images of smectite.	미상	SEM, EDS, EPMA, XRD, TEM	TEM images of altered tuff (ion-milled section of sample Udo-A). (a) Porous leached glass. (b) Smectite and amorphous domains in the alteration rind replacing glass. Numbers indicate analysis positions shown in Table 1. (c) Mixture of randomly-oriented smectite and (Fe,Ti)-rich amorphous nanogranules. Number indicates analysis position shown in Table 1. (d) Lattice	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956
282	2/5/6/7/9/10/13/14/15/8/11/12/220/221/222/217/219/215/216/218	Chemistry of clay and Ti and Fe-rich amorphous silicates. TEM-EDS analysis of ion-milled section (sample Udo-A).	미상	SEM, EDS, EPMA, XRD, TEM	Chemistry of clay and Ti and Fe-rich amorphous silicates. TEM-EDS analysis of ion-milled section (sample Udo-A).	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956
283	2/5/6/7/9/10/13/14/15/8/11/12/220/221/222/217/219/215/216/218	Electron microprobe analysis of fresh glass, altered glass (mixture of smectite and amorphous silicates), and pore-lining smectite (sample Udo-A).	미상	SEM, EDS, EPMA, XRD, TEM	Electron microprobe analysis of fresh glass, altered glass (mixture of smectite and amorphous silicates), and pore-lining smectite (sample Udo-A).	제주도 우도 현무암질 화산재의 표성 변질작용 (한국광물학회지 Miner_v23n2p141)	33.497297 126.966956

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
284	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	Geologic and index maps of Janggi area (modified from Tateiwa, 1924; Noh, 1989).	미상	XRD, BET분석법, pH측정, EA	Geologic and index maps of Janggi area (modified from Tateiwa, 1924; Noh, 1989).	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
285	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A correlation between cations exchange capacity (CEC) and contents of zeolite and/or smectite of the altered pumiceous lapilli tuffs. (A) Total CEC vs. effective weight content of zeolite and smectite (Z: zeolite, S: smectite). (B) A variation of CEC values determined by methylene blue method vs. smectite contents.	미상	XRD, BET분석법, pH측정, EA	A correlation between cations exchange capacity (CEC) and contents of zeolite and/or smectite of the altered pumiceous lapilli tuffs. (A) Total CEC vs. effective weight content of zeolite and smectite (Z: zeolite, S: smectite). (B) A variation of CEC values determined by methylene blue method vs. smectite	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
286	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A correlation between pH and content of silica minerals of the altered pumiceous lapilli tuffs.	미상	XRD, BET분석법, pH측정, EA	A correlation between pH and content of silica minerals of the altered pumiceous lapilli tuffs.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
287	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A correlation between pH and smectite contents of the altered pumiceous lapilli tuffs.	미상	XRD, BET분석법, pH측정, EA	A correlation between pH and smectite contents of the altered pumiceous lapilli tuffs.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
288	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A possible reaction passway of pore fluid within the altered pumiceous lapilli tuff at that time of diagenesis, schematically expressed in the solubility diagram of amorphous SiO ₂ (modified from Gunter, 1991).	미상	XRD, BET분석법, pH측정, EA	A possible reaction passway of pore fluid within the altered pumiceous lapilli tuff at that time of diagenesis, schematically expressed in the solubility diagram of amorphous SiO ₂ (modified from Gunter, 1991).	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
289	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A correlation between pH and possible H-smectite content calculated by CEC difference of the altered pumiceous lapilli tuffs (Δ CEC: CECAA-CECCL).	미상	XRD, BET분석법, pH측정, EA	A correlation between pH and possible H-smectite content calculated by CEC difference of the altered pumiceous lapilli tuffs (Δ CEC: CECAA-CECCL).	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
290	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A correlation between specific surface area and effective contents of the altered pumiceous lapilli tuffs (Z: zeolite, S: smectite, P: pumice).	미상	XRD, BET분석법, pH측정, EA	A correlation between specific surface area and effective contents of the altered pumiceous lapilli tuffs (Z: zeolite, S: smectite, P: pumice).	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
291	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	SEM Micrographs showing the differences of crystal size and texture in the altered pumiceous tuffs. (A), (B) The difference of crystal size of clinoptilolites. (C), (D) A degree of development of micro-pore in glassy parts.	미상	XRD, BET분석법, pH측정, EA	SEM Micrographs showing the differences of crystal size and texture in the altered pumiceous tuffs. (A), (B) The difference of crystal size of clinoptilolites. (C), (D) A degree of development of micro-pore in glassy parts.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
292	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	SEM Micrographs showing the morphology and crystallinity of smectites. (A), (C) H-smectites showing crenulated shape. (B), (D) Typical smectites with bladed shape.	미상	XRD, BET분석법, pH측정, EA	SEM Micrographs showing the morphology and crystallinity of smectites. (A), (C) H-smectites showing crenulated shape. (B), (D) Typical smectites with bladed shape.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
293	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	X-ray diffraction patterns of H- and Ca- smectites.	미상	XRD, BET분석법, pH측정, EA	X-ray diffraction patterns of H- and Ca-smectites.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
294	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	SEM Micrographs showing the close paragenetic relations of H-smectite and opal-CT.	미상	XRD, BET분석법, pH측정, EA	SEM Micrographs showing the close paragenetic relations of H-smectite and opal-CT.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
295	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	A correlation between content of smectite and silica minerals of the altered pumiceous lapilli tuffs.	미상	XRD, BET분석법, pH측정, EA	A correlation between content of smectite and silica minerals of the altered pumiceous lapilli tuffs.	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
296	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	Photographs showing the mode of diagenetic alteration of pumice fragments of the altered pumiceous lapilli tuffs. (A) A pumiceous lapilli tuff containing many pumice fragments. (B) An unaltered pumice fragment with spherical vesicles. (C), (D) The mode of diagenetic alteration of a pumice fragment.	미상	XRD, BET분석법, pH측정, EA	Photographs showing the mode of diagenetic alteration of pumice fragments of the altered pumiceous lapilli tuffs. (A) A pumiceous lapilli tuff containing many pumice fragments. (B) An unaltered pumice fragment with spherical vesicles. (C), (D) The mode of diagenetic alteration of a pumice	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
297	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	Mineral composition of the altered pumiceous lapilli tuffs determined by quantitative XRD analysis	미상	XRD, BET분석법, pH측정, EA	Mineral composition of the altered pumiceous lapilli tuffs determined by quantitative XRD analysis	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
298	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	Cation exchange capacity and pH of the altered pumiceous lapilli tuffs (unit: meq/100g)	미상	XRD, BET분석법, pH측정, EA	Cation exchange capacity and pH of the altered pumiceous lapilli tuffs (unit: meq/100g)	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
299	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	Specific surface area and pumice content of the altered pumiceous lapilli tuffs	미상	XRD, BET분석법, pH측정, EA	Specific surface area and pumice content of the altered pumiceous lapilli tuffs	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
300	Ms0298/3032/3034/ 3046/8136/0293, Mb3076/3077/3068/ 3072/3073/3074/405 1, My3042/3051/3052/ 4043/4052/8139	The contents of total organic carbon of the altered pumiceous lapilli tuffs determined by element analyzer	미상	XRD, BET분석법, pH측정, EA	The contents of total organic carbon of the altered pumiceous lapilli tuffs determined by element analyzer	H-스멕타이트의 광물학적 특성과 생성관계 (한국광물학회지 Miner_v23n4p377)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
301	GJ-01-1~5, GJ-02- 1~5, GJ-03-1~5, GJ- 04-1~5	Geologic map of the study area.	미상	EPMA, XRF	Geologic map of the study area.	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
302	GJ-01-1~5, GJ-02- 1~5, GJ-03-1~5, GJ- 04-1~5	Vertical cross section of the Jukgang orebody in Gukjeon deoposit showing sulphide mineralization (Numbers are sample locations).	미상	EPMA, XRF	Vertical cross section of the Jukgang orebody in Gukjeon deoposit showing sulphide mineralization (Numbers are sample locations).	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
303	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Photomicrographs of several rocks in the study area. (A) Milyang Andesite showing plagioclase (Pl) pseudomorph replaced by calcite (Cc) and chlorite (Ch). (B) The lower part of the Jeonggagsan formation of tuffaceous shale showing minor fault. (C) The middle part of the Jeonggagsan formation of tuff showing anhedral phenocrysts of quartz (Qt) and plagioclase (Pl). (D) The upper part of the Jeonggagsan formation showing tuffaceous sandstone.	미상	EPMA, XRF	Photomicrographs of several rocks in the study area. (A) Milyang Andesite showing plagioclase (Pl) pseudomorph replaced by calcite (Cc) and chlorite (Ch). (B) The lower part of the Jeonggagsan formation of tuffaceous shale showing minor fault. (C) The middle part of the Jeonggagsan formation of tuff showing anhedral phenocrysts of quartz (Qt) and plagioclase (Pl). (D) The upper part of the Jeonggagsan formation showing	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
304	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Stratigraphic section of the Jeonggagsan formation.	미상	EPMA, XRF	Stratigraphic section of the Jeonggagsan formation.	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
305	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Photomicrographs of limestone in the lower part of the Jeonggagsan formation. (A), (B) Altered limestones consisting of actinolite (Ac), calcite (Cc), quartz (Qt), etc. (C) Large crystal aggregates of calcite by recrystallization. (D) Fresh limestone showing fine aggregates of calcite.	미상	EPMA, XRF	Photomicrographs of limestone in the lower part of the Jeonggagsan formation. (A), (B) Altered limestones consisting of actinolite (Ac), calcite (Cc), quartz (Qt), etc. (C) Large crystal aggregates of calcite by recrystallization. (D) Fresh limestone showing fine aggregates of calcite.	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
306	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	The Gukjeon mine consists of the Jukgang orebody (underground map) in west upper part and the East orebody in east lower part.	미상	EPMA, XRF	The Gukjeon mine consists of the Jukgang orebody (underground map) in west upper part and the East orebody in east lower part.	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
307	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Photomicrographs of mineral occurrences in the study area. (A) Sphalerite (Sp) coexisting with galena (Gn), chalcopyrite (Cp), quartz (Qt) and clinopyroxene (Cx). (B) Sphalerite with minor inclusions of chalcopyrite coexisting with garnet (Gt). (C) Galena coexisting with sphalerite, quartz and clinopyroxene. (D) Galena coexisting with axinite (Ax). (E) Actinolite (Ac) and pyrite (Py) included in chalcopyrite. (F) Arsenopyrite (Ap) coexisting chalcopyrite and sphalerite. (G), (H) Sphalerite included in arsenopyrite. (I) Pyrrhotite (Po) included in sphalerite, pyrite coexisting with sphalerite. (J) Pyrite coexisting with garnet. (K), (L) Pyrrhotite and chalcopyrite and galena included in sphalerite.	미상	EPMA, XRF	Photomicrographs of mineral occurrences in the study area. (A) Sphalerite (Sp) coexisting with galena (Gn), chalcopyrite (Cp), quartz (Qt) and clinopyroxene (Cx). (B) Sphalerite with minor inclusions of chalcopyrite coexisting with garnet (Gt). (C) Galena coexisting with sphalerite, quartz and clinopyroxene. (D) Galena coexisting with axinite (Ax). (E) Actinolite (Ac) and pyrite (Py) included in chalcopyrite. (F) Arsenopyrite (Ap) coexisting chalcopyrite and sphalerite. (G), (H) Sphalerite included in arsenopyrite. (I) Pyrrhotite (Po) included in sphalerite, pyrite coexisting with sphalerite. (J) Pyrite coexisting with garnet. (K), (L) Pyrrhotite and chalcopyrite and galena	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
308	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Generalized paragenetic sequence of minerals from the Gukjeon Pb-Zn deposit.	미상	EPMA, XRF	Generalized paragenetic sequence of minerals from the Gukjeon Pb-Zn deposit.	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
309	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Sketch showing the skarn zone of the Jukgang orebody in Gukjeon deposit. 1: clinopyroxene skarn zone, 2: clinopyroxene-garnet skarn zone, 3: garnet skarn zone, 4: hornfels zone.	미상	EPMA, XRF	Sketch showing the skarn zone of the Jukgang orebody in Gukjeon deposit. 1: clinopyroxene skarn zone, 2: clinopyroxene-garnet skarn zone, 3: garnet skarn zone, 4: hornfels zone.	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
310	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Major elements (wt%) in limestone from Gukjeon deposit	미상	EPMA, XRF	Major elements (wt%) in limestone from Gukjeon deposit	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
311	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Representative EPMA analyses of clinopyroxene from the Gukjeon Pb-Zn deposit	미상	EPMA, XRF	Representative EPMA analyses of clinopyroxene from the Gukjeon Pb-Zn deposit	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
312	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Representative EPMA analyses of Ca-garnet from the Gukjeon Pb-Zn deposit	미상	EPMA, XRF	Representative EPMA analyses of Ca-garnet from the Gukjeon Pb-Zn deposit	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
313	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Representative EPMA analyses of actinolite from the Gukjeon Pb-Zn deposit	미상	EPMA, XRF	Representative EPMA analyses of actinolite from the Gukjeon Pb-Zn deposit	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
314	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Representative EPMA analyses of chlorite from the Gukjeon Pb-Zn deposit	미상	EPMA, XRF	Representative EPMA analyses of chlorite from the Gukjeon Pb-Zn deposit	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
315	GJ-01-1~5, GJ-02-1~5, GJ-03-1~5, GJ-04-1~5	Representative EPMA analyses of sphalerite from the Gukjeon Pb-Zn deposit	미상	EPMA, XRF	Representative EPMA analyses of sphalerite from the Gukjeon Pb-Zn deposit	국전 Pb-Zn 스카른 광상의 산출상태 (한국광물학회지 Miner_v23n4p413)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
316	1~12	X-ray diffraction patterns of bulk halloysite samples. Basal reflections of halloysite at 10.1 and 3.39 of hydrated halloysite were shifted to 7.3 and 3.6 Å, respectively, of dehydrated halloysite after heat treatment.	미상	XRD, SEM, EPMA	X-ray diffraction patterns of bulk halloysite samples. Basal reflections of halloysite at 10.1 and 3.39 of hydrated halloysite were shifted to 7.3 and 3.6 Å, respectively, of dehydrated halloysite after heat treatment.	울릉도 조면암질 유리의 변질에 의한 할로이사이트의 생성 (한국광물학회지 Miner_v24n2p111)	37.453544 130.874069
317	1~12	Transmission electron microscopy of alteration products. (a), (b) Onion-like internal structure of spherical halloysite. EDS analysis shows the Fe peak. (c) Thick and continuous lattice images of halloysite. (d) Halloysite plate with curled edges. (e) Si-rich amorphous spheres associated with an halloysite sphere (right). (f) Granular aggregates of Si-rich amorphous materials.	미상	XRD, SEM, EPMA	Transmission electron microscopy of alteration products. (a), (b) Onion-like internal structure of spherical halloysite. EDS analysis shows the Fe peak. (c) Thick and continuous lattice images of halloysite. (d) Halloysite plate with curled edges. (e) Si-rich amorphous spheres associated with an halloysite sphere (right). (f) Granular aggregates of Si-rich amorphous materials.	울릉도 조면암질 유리의 변질에 의한 할로이사이트의 생성 (한국광물학회지 Miner_v24n2p111)	37.453544 130.874069

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
318	1~12	Scanning electron microscopy of the alteration of trachytic ash. (a) Altered trachytic ash. (b),(c) Interparticle spaces almost filled with halloysite. The trachytic glass was dissolved creating internal pores (black). Si-rich amorphous hemispheres with an oscillatory zoning replaces glass (arrows). (d) Globular aggregates of platy halloysite. (e) Leached glass at the glass alteration front. (f) Amorphous precipitates with Si-rich colloform structure.	미상	XRD, SEM, EPMA	Scanning electron microscopy of the alteration of trachytic ash. (a) Altered trachytic ash. (b),(c) Interparticle spaces almost filled with halloysite. The trachytic glass was dissolved creating internal pores (black). Si-rich amorphous hemispheres with an oscillatory zoning replaces glass (arrows). (d) Globular aggregates of platy halloysite. (e) Leached glass at the glass alteration front. (f) Amorphous precipitates with Si-rich colloform structure.	울릉도 조면암질 유리의 변질에 의한 할로이사이트의 생성 (한국광물학회지 Miner_v24n2p111)	37.453544 130.874069
319	1~12	Electron microprobe analysis of altered trachytic tuff	미상	XRD, SEM, EPMA	Electron microprobe analysis of altered trachytic tuff	울릉도 조면암질 유리의 변질에 의한 할로이사이트의 생성 (한국광물학회지 Miner_v24n2p111)	37.453544 130.874069
320	MJ-1~5	Geological map of the study area and location of pegmatites (the square box), shown in Fig. 8 in details.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Geological map of the study area and location of pegmatites (the square box), shown in Fig. 8 in details.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
321	MJ-1~5	Photomicrographs of leucocratic granitic gneiss (A & B) and altered zone between granitic gneiss and pegmatite (C & D). Qtz: quartz, Pl: plagioclase, K-f: K-feldspar, Bt: biotite, Gt: almandine.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Photomicrographs of leucocratic granitic gneiss (A & B) and altered zone between granitic gneiss and pegmatite (C & D). Qtz: quartz, Pl: plagioclase, K-f: K-feldspar, Bt: biotite, Gt: almandine.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
322	MJ-1~5	Photomicrographs of pegmatites. (A) Quartz and muscovite. (B) Fine plagioclase intergrowth in megacryst of microcline. (C) Perthite texture of fine plagioclase in K-feldspar. (D) Microcline and muscovites. Qtz: quartz, Pl: plagioclase, K-f: K-feldspar, Mc: muscovite.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Photomicrographs of pegmatites. (A) Quartz and muscovite. (B) Fine plagioclase intergrowth in megacryst of microcline. (C) Perthite texture of fine plagioclase in K-feldspar. (D) Microcline and muscovites. Qtz: quartz, Pl: plagioclase, K-f: K-feldspar, Mc: muscovite.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
323	MJ-1~5	Large columbite in association with K-feldspar. (A) Photomicrographs, (B) SEM element mapping. (C, D, E) SEM EDX (Core MJ-3). Qtz: quartz, K-f: K-feldspar, Cl: columbite.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Large columbite in association with K-feldspar. (A) Photomicrographs, (B) SEM element mapping. (C, D, E) SEM EDX (Core MJ-3). Qtz: quartz, K-f: K-feldspar, Cl: columbite.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
324	MJ-1~5	Large euhedral columbite with quartz and K-feldspar. (A) Photomicrographs. (B) SEM BSI. (C) SEM EDX (Core MJ-3). Qtz: quartz, K-f: K-feldspar.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Large euhedral columbite with quartz and K-feldspar. (A) Photomicrographs. (B) SEM BSI. (C) SEM EDX (Core MJ-3). Qtz: quartz, K-f: K-feldspar.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
325	MJ-1~5	Microcrystalline columbite with muscovite. (A) Photomicrographs. (B) SEM BSI. (C) SEM EDX (Core MJ-2). Mc: muscovite.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Microcrystalline columbite with muscovite. (A) Photomicrographs. (B) SEM BSI. (C) SEM EDX (Core MJ-2). Mc: muscovite.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
326	MJ-1~5	Microcrystalline columbite with muscovite. (A) Photomicrographs. (B) SEM BSI. (C) SEM EDX (Core MJ-4). Mc: muscovite.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Microcrystalline columbite with muscovite. (A) Photomicrographs. (B) SEM BSI. (C) SEM EDX (Core MJ-4). Mc: muscovite.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
327	MJ-1~5	Detailed description of vertical sections obtained from core-logging in Fig. 8.	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Detailed description of vertical sections obtained from core-logging in Fig. 8.	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
328	MJ-1~5	EPMA analyses of feldspars in pegmatites	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	EPMA analyses of feldspars in pegmatites	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
329	MJ-1~5	Trace elements and REE analyses of feldspars and muscovite in pegmatites (ppm)	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Trace elements and REE analyses of feldspars and muscovite in pegmatites (ppm)	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
330	MJ-1~5	EPMA analyses of muscovite in pegmatites	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	EPMA analyses of muscovite in pegmatites	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
331	MJ-1~5	Quantitative analyses of pegmatite by Rietveld method using SiroQuant V3.0	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	Quantitative analyses of pegmatite by Rietveld method using SiroQuant V3.0	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
332	MJ-1~5	EPMA analyses of coarse-grained columbite in pegmatites	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	EPMA analyses of coarse-grained columbite in pegmatites	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
333	MJ-1~5	EPMA analyses of microcrystalline columbite in pegmatites	SiroQuant V3.0	XRD, EPMA, ICP-MS, LA-ICP-MS	EPMA analyses of microcrystalline columbite in pegmatites	무주 페그마타이트 내 Nb-Ta 광화대의 산출상태 (한국광물학회지 Miner_v24n2p133)	35.923061 127.667661; 35.923061 127.684144; 35.906853 127.684144; 35.906853 127.667661
334	1-1~31	Location map of the study area. 1 = Dado mine, 2 = Ogchool mine at Gasado, 3 = Seongsan mine, 4 = Gusi mine, 5 =Mingyung mine at Nowhado (revised from Yoo et al., 2009).	미상	XRF, ICP-MS, XRD	Location map of the study area. 1 = Dado mine, 2 = Ogchool mine at Gasado, 3 = Seongsan mine, 4 = Gusi mine, 5 =Mingyung mine at Nowhado (revised from Yoo et al., 2009).	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
335	1-1~31	X-ray powder diffraction patterns (Cu K α radiation) of (A) clay ores (1 = Ogchool kaolin, 2 = Seongsan kaolin, 3 = Dado pyrophyllite, 4 =Mingyung pyrophyllite, 5 = Gusi pyrophyllite) and (B) their related rocks in the Jeonnam clay province (Yoo et al., 2009). KEY. P = pyrophyllite, Q = quartz, K = kaolinite, D = diaspore, C = corundum, M= micas, Pl-f = plagioclases.	미상	XRF, ICP-MS, XRD	X-ray powder diffraction patterns (Cu K α radiation) of (A) clay ores (1 = Ogchool kaolin, 2 = Seongsan kaolin, 3 = Dado pyrophyllite, 4 =Mingyung pyrophyllite, 5 = Gusi pyrophyllite) and (B) their related rocks in the Jeonnam clay province (Yoo et al., 2009). KEY. P = pyrophyllite, Q = quartz, K = kaolinite, D = diaspore, C = corundum, M= micas,	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
336	1-1~31	A generalized mineral paragenesis of major formations in the Jeonnam pyrophyllite/kaolinite province. Younger formations are arranged in an ascending order. Dot means the sporadical presence of each mineral. KEY. Up = upper, Lo = lower, Silici = silicified, fm = formation, Py/Pyo = pyrophyllite, Ka/Kao = kaolinite, Seri = sericite, Qtz = quartz, Feld = feldspars, Alu = alunite, Coru = corundum, Dia = diaspore, I-M = illite-montmorillonite interstratified mineral (revised from Yoo et al., 2009).	미상	XRF, ICP-MS, XRD	A generalized mineral paragenesis of major formations in the Jeonnam pyrophyllite/kaolinite province. Younger formations are arranged in an ascending order. Dot means the sporadical presence of each mineral. KEY. Up = upper, Lo = lower, Silici = silicified, fm = formation, Py/Pyo = pyrophyllite, Ka/Kao = kaolinite, Seri = sericite, Qtz = quartz, Feld = feldspars, Alu = alunite, Coru = corundum, Dia = diaspore, I-M = illite-montmorillonite interstratified mineral (revised from Yoo et al., 2009).	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
337	1-1~31	Variation diagrams of major elements for kaolinite/pyrophyllite ores (diamond), purple beds (triangle) and upper tuff formations (square) in the study area.	미상	XRF, ICP-MS, XRD	Variation diagrams of major elements for kaolinite/pyrophyllite ores (diamond), purple beds (triangle) and upper tuff formations (square) in the study area.	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
338	1-1~31	Chondrite-normalized REE patterns of kaolinite/pyrophyllite ores (solid square), purple beds (solid circle) and upper tuff formations (open circle) from the study area. KEY A =Mingyung mine, B = Ogchool mine, C = Seongsan mine, and D = Gusi mine. Samples from the Dado mine was not analyzed for REEs.	미상	XRF, ICP-MS, XRD	Chondrite-normalized REE patterns of kaolinite/pyrophyllite ores (solid square), purple beds (solid circle) and upper tuff formations (open circle) from the study area. KEY A =Mingyung mine, B = Ogchool mine, C = Seongsan mine, and D = Gusi mine. Samples from the Dado mine was not analyzed for REEs.	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
339	1-1~31	Geology of several pyrophyllite/kaolinite deposits in the Jeonnam clayey deposits. Stratigraphy was simply classified in the viewpoint of lithology from the main outcrops of the Seongsan and Mingyung mines.	미상	XRF, ICP-MS, XRD	Geology of several pyrophyllite/kaolinite deposits in the Jeonnam clayey deposits. Stratigraphy was simply classified in the viewpoint of lithology from the main outcrops of the Seongsan and Mingyung mines.	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
340	1-1~31	Chemical compositions (oxides, Wt.%) of clay ores and their adjacent rocks, Haenam	미상	XRF, ICP-MS, XRD	Chemical compositions (oxides, Wt.%) of clay ores and their adjacent rocks, Haenam	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
341	1-1~31	Concentrations of rare earth element (ppm) of clay ores and their adjacent formations in the Jeonnam clayey province	미상	XRF, ICP-MS, XRD	Concentrations of rare earth element (ppm) of clay ores and their adjacent formations in the Jeonnam clayey province	전남일원 점토광상의 광물 및 지화학적 특성과 효과적 탐사를 위한 건층의 선정 (한국광물학회지 Miner_v24n4p265)	35.467767 125.730861; 35.467767 127.733806; 33.994839 127.733806; 33.994839 125.730861
342	HL146/147	(a) Distribution map of mantle xenolith locations in the Jeju Island and (b) Geological map of study area and sampling site of Dongsuak crater (Park, 2000).	AMS 프로그램	LA-ICP-MS	(a) Distribution map of mantle xenolith locations in the Jeju Island and (b) Geological map of study area and sampling site of Dongsuak crater (Park, 2000).	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
343	HL146/147	Optical photomicrographs of a) olivine and plagioclase in the Dongsuak alkali basalt, and b) clinopyroxene xenocryst in the Dongsuak alkali basalt derived from spinel peridotite. c) d) Optical photomicrographs of spinel peridotites enclosed in Dongsuak alkali basalt.	AMS 프로그램	LA-ICP-MS	Optical photomicrographs of a) olivine and plagioclase in the Dongsuak alkali basalt, and b) clinopyroxene xenocryst in the Dongsuak alkali basalt derived from spinel peridotite. c) d) Optical photomicrographs of spinel peridotites enclosed in Dongsuak alkali basalt.	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531
344	HL146/147	a) Primitive mantle-normalized REE abundances for clinopyroxenes in the Dongsuak spinel peridotites. b) Comparison of trace element compositions predicted for residual clinopyroxene having undergone fractional melting (1, 3, 5, 10% dashed lines) with the analyzed clinopyroxene compositions of the Dongsuak spinel peridotites. The compositions are normalized to primitive mantle values (Hofmann, 1988). Cpx = clinopyroxene.	AMS 프로그램	LA-ICP-MS	a) Primitive mantle-normalized REE abundances for clinopyroxenes in the Dongsuak spinel peridotites. b) Comparison of trace element compositions predicted for residual clinopyroxene having undergone fractional melting (1, 3, 5, 10% dashed lines) with the analyzed clinopyroxene compositions of the Dongsuak spinel peridotites. The compositions are normalized to primitive mantle values (Hofmann, 1988). Cpx = clinopyroxene.	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531
345	HL146/147	a) Ti/Eu versus Ce/Yb, and b) (Ti/Eu) _n versus (Zr/Sm) _n ratios of clinopyroxenes in Dongsuak spinel peridotites (Coltorti et al., 2000; Byerly et al., 2021). Primitive mantle values are from Hofmann (1988).	AMS 프로그램	LA-ICP-MS	a) Ti/Eu versus Ce/Yb, and b) (Ti/Eu) _n versus (Zr/Sm) _n ratios of clinopyroxenes in Dongsuak spinel peridotites (Coltorti et al., 2000; Byerly et al., 2021). Primitive mantle values are from Hofmann (1988).	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531
346	HL146/147	Temperature versus pressure (depth) conditions for the Dongsuak spinel peridotite xenoliths. Temperatures and maximum pressures were calculated using the Brey and Köhler (1990) thermometer. The crust thickness is 30 km (Kim and Li, 1998). Geothermal gradient, based on 73mW/m ² heat flow, is from the Pollack and Chapman (1977) and Han and Keehm (1997). The geothermal gradients of Tariat, Nushan, Jeju Island, and Fukue-jima geothermal lines are from Ionov et al. (1998), Xu et al. (1998), Choi et al. (2001), and Umino and Yoshizawa (1996), respectively. Pl-p, Sp-p and Gt-p are plagioclase, spinel and garnet peridotites, respectively.	AMS 프로그램	LA-ICP-MS	Temperature versus pressure (depth) conditions for the Dongsuak spinel peridotite xenoliths. Temperatures and maximum pressures were calculated using the Brey and Köhler (1990) thermometer. The crust thickness is 30 km (Kim and Li, 1998). Geothermal gradient, based on 73mW/m ² heat flow, is from the Pollack and Chapman (1977) and Han and Keehm (1997). The geothermal gradients of Tariat, Nushan, Jeju Island, and Fukue-jima geothermal lines are from Ionov et al. (1998), Xu et al. (1998), Choi et al. (2001), and Umino and Yoshizawa (1996), respectively. Pl-p, Sp-p and Gt-p are plagioclase, spinel and garnet peridotites, respectively.	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531
347	HL146/147	Table 1. Representative major element compositions (wt%) of olivine (Ol), orthopyroxene (Opx), and clinopyroxene (Cpx) in the Dongsuak spinel peridotites	AMS 프로그램	LA-ICP-MS	Table 1. Representative major element compositions (wt%) of olivine (Ol), orthopyroxene (Opx), and clinopyroxene (Cpx) in the Dongsuak spinel peridotites	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
348	HL146/147	Table 2. Representative trace and rare earth element compositions (ppm) of clinopyroxenes in the Dongsuak spinel peridotites	AMS 프로그램	LA-ICP-MS	Table 2. Representative trace and rare earth element compositions (ppm) of clinopyroxenes in the Dongsuak spinel peridotites	제주도 동수악 분화구에서 산출되는 맨틀 포획암의 암석학적 연구 (광물과암석 MinPet_v35n3p173)	33.360258 126.626531
349	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Generalized geological map of the Janggun Pb-Zn deposit (Modified after Lee et al., 1990; Yoo, 2012).	미상	FE-EPMA	Generalized geological map of the Janggun Pb-Zn deposit (Modified after Lee et al., 1990; Yoo, 2012).	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808
350	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Underground geological map in the main adit (591 m level) of the Janggun Pb-Zn deposit (Modified after Lee et al., 1990).	미상	FE-EPMA	Underground geological map in the main adit (591 m level) of the Janggun Pb-Zn deposit (Modified after Lee et al., 1990).	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808
351	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Mica varieties in terms of Mg-Li vs. Fe+Mn+Ti-Alvi (Modified after Tischendorf et al, 1997). Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon Au-Ag deposit (Lee, 1993).	미상	FE-EPMA	Mica varieties in terms of Mg-Li vs. Fe+Mn+Ti-Alvi (Modified after Tischendorf et al, 1997). Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808
352	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Compositional variations of white micas from the Janggun Pb-Zn deposit (Modified after Craw and MacKenzie, 2016). Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon Au-Ag deposit (Lee, 1993)	미상	FE-EPMA	Compositional variations of white micas from the Janggun Pb-Zn deposit (Modified after Craw and MacKenzie, 2016). Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon Au-Ag deposit (Lee, 1993)	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808
353	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Compositional variation in white mica from the Janggun Pb-Zn deposit. (a) total Si (apfu) vs. Fe (apfu), (b) total Si (apfu) vs. Mg (apfu), (c) total Si (apfu) vs. Mn (apfu), (d) total Si (apfu) vs. Fe+Mg (apfu) (Modified after Christie and Brathwaite, 2003). Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon Au-Ag deposit (Lee, 1993).	미상	FE-EPMA	Compositional variation in white mica from the Janggun Pb-Zn deposit. (a) total Si (apfu) vs. Fe (apfu), (b) total Si (apfu) vs. Mg (apfu), (c) total Si (apfu) vs. Mn (apfu), (d) total Si (apfu) vs. Fe+Mg (apfu) (Modified after Christie and Brathwaite, 2003). Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808
354	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Compositional variation in white mica from the Janggun Pb-Zn deposit. (a) total Al (apfu) vs. Fe+Mg+Mn (apfu), (b) total Al (apfu) vs. K+Na+2Ca (apfu), (c) total Al (apfu) vs. K/(K+Na+2Ca) (apfu) (Modified after Cohen, 2011). Arrows represent compositional vectors for main substitution mechanisms and black open symbols represent end-member compositions. Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon Au-Ag deposit (Lee, 1993).	미상	FE-EPMA	Compositional variation in white mica from the Janggun Pb-Zn deposit. (a) total Al (apfu) vs. Fe+Mg+Mn (apfu), (b) total Al (apfu) vs. K+Na+2Ca (apfu), (c) total Al (apfu) vs. K/(K+Na+2Ca) (apfu) (Modified after Cohen, 2011). Arrows represent compositional vectors for main substitution mechanisms and black open symbols represent end-member compositions. Also are shown the Yeonhwa 1 Pb-Zn deposit and Gumoonso area (Kim, 2017) and Dunjeon Au-Ag deposit and Baekjeon Au-Ag deposit (Lee, 1993).	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
355	JG2-1-3/4/11, JG5-3-28, JG3-1-17/18, JG3-2-22, JG3-3-24, JG3-4-27	Chemical compositions of white micas from Janggun Pb-Zn deposit, some deposits and Gumoonso area	미상	FE-EPMA	Chemical compositions of white micas from Janggun Pb-Zn deposit, some deposits and Gumoonso area	장군 연-아연 광상의 모암변질대에서 산출되는 백색운모의 산상 및 화학조성 (광물과암석 MinPet_v35n4p469)	36.858775 129.060808
356	Mb3076/3077/3074/3068/4051/3073/3072, My0293/3046/3034/3032/0298/3052/3042/8139/4052/4043	Geologic and index maps of Janggi area (modified from Tateiwa, 1924; Noh, 1989).	미상	EPMA, ICP/MS, XRF	Geologic and index maps of Janggi area (modified from Tateiwa, 1924; Noh, 1989).	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
357	Mb3076/3077/3074/3068/4051/3073/3072, My0293/3046/3034/3032/0298/3052/3042/8139/4052/4043	Columnar sections of the Beomgockri Group in Bangsanri area.	미상	EPMA, ICP/MS, XRF	Columnar sections of the Beomgockri Group in Bangsanri area.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
358	Mb3076/3077/3074/3068/4051/3073/3072, My0293/3046/3034/3032/0298/3052/3042/8139/4052/4043	Columnar sections of the Beomgockri Group in Shingyeri and Yangpori area.	미상	EPMA, ICP/MS, XRF	Columnar sections of the Beomgockri Group in Shingyeri and Yangpori area.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
359	Mb3076/3077/3074/3068/4051/3073/3072, My0293/3046/3034/3032/0298/3052/3042/8139/4052/4043	Microphotographs of pumice fragments in the pumiceous lapilli tuff. A. A fibrous pumice fragment with tubular vesicles; B. A pumice fragment with subspherical vesicles; C. A pumice fragment with irregular grain boundary; D. A pumice fragment with elongated shape by welding.	미상	EPMA, ICP/MS, XRF	Microphotographs of pumice fragments in the pumiceous lapilli tuff. A. A fibrous pumice fragment with tubular vesicles; B. A pumice fragment with subspherical vesicles; C. A pumice fragment with irregular grain boundary; D. A pumice fragment with elongated shape by welding.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
360	Mb3076/3077/3074/3068/4051/3073/3072, My0293/3046/3034/3032/0298/3052/3042/8139/4052/4043	Microphotographs of pumiceous lapilli tuff showing the texture and composition of phenocrysts and rock fragments. A. A plagioclase phenocryst with Carlsbad-Albite twin and zoning; B. Partial vitrification mode of plagioclase; C. Hornblende phenocryst with subhedral shape; D. Andesitic to Basaltic rock fragments with angular shape.	미상	EPMA, ICP/MS, XRF	Microphotographs of pumiceous lapilli tuff showing the texture and composition of phenocrysts and rock fragments. A. A plagioclase phenocryst with Carlsbad-Albite twin and zoning; B. Partial vitrification mode of plagioclase; C. Hornblende phenocryst with subhedral shape; D. Andesitic to Basaltic rock fragments with angular shape.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
361	Mb3076/3077/3074/3068/4051/3073/3072, My0293/3046/3034/3032/0298/3052/3042/8139/4052/4043	Ternary diagrams illustrating the composition of plagioclase phenocrysts in perlite and associated volcanic rocks (modified from Noh and Hong, 2005).	미상	EPMA, ICP/MS, XRF	Ternary diagrams illustrating the composition of plagioclase phenocrysts in perlite and associated volcanic rocks (modified from Noh and Hong, 2005).	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
362	Mb3076/3077/3074/ 3068/4051/3073/307 2, My0293/3046/3034/ 3032/0298/3052/304 2/8139/4052/4043	Nb/Y-Zr/TiO ₂ discrimination diagram for perlite and other associated volcanic rocks (Noh and Hong, 2005).	미상	EPMA, ICP/MS, XRF	Nb/Y-Zr/TiO ₂ discrimination diagram for perlite and other associated volcanic rocks (Noh and Hong, 2005).	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
363	Mb3076/3077/3074/ 3068/4051/3073/307 2, My0293/3046/3034/ 3032/0298/3052/304 2/8139/4052/4043	Advanced diagenetic alteration of perlite to zeolites in the lower part of the perlite formation.	미상	EPMA, ICP/MS, XRF	Advanced diagenetic alteration of perlite to zeolites in the lower part of the perlite formation.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
364	Mb3076/3077/3074/ 3068/4051/3073/307 2, My0293/3046/3034/ 3032/0298/3052/304 2/8139/4052/4043	A schematic illustration of pyroclastic facies and environments for the origin and formation of Beomgockri Group in the Janggi area (modified from Fisher and Schmincke; Noh and Hong, 2006).	미상	EPMA, ICP/MS, XRF	A schematic illustration of pyroclastic facies and environments for the origin and formation of Beomgockri Group in the Janggi area (modified from Fisher and Schmincke; Noh and Hong, 2006).	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
365	Mb3076/3077/3074/ 3068/4051/3073/307 2, My0293/3046/3034/ 3032/0298/3052/304 2/8139/4052/4043	Megascopic characters of pumice and rock fragments in tuffaceous rocks from the Manghaesan Tuff.	미상	EPMA, ICP/MS, XRF	Megascopic characters of pumice and rock fragments in tuffaceous rocks from the Manghaesan Tuff.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
366	Mb3076/3077/3074/ 3068/4051/3073/307 2, My0293/3046/3034/ 3032/0298/3052/304 2/8139/4052/4043	Microscopic characteristics of phenocrysts and rock fragments in pumiceous lapilli tuff.	미상	EPMA, ICP/MS, XRF	Microscopic characteristics of phenocrysts and rock fragments in pumiceous lapilli tuff.	장기 지역 제 3기 범곡리층군의 화산쇄설성 암상과 층서 (지질학회지 Geol_v46n2p141)	35.958333 129.450000; 35.958333 129.541667; 35.875000 129.541667; 35.875000 129.450000
367	carbonatite-phoscorite	Geologic map of the Hongcheon Fe-REE deposits (revised from Park and Lee, 2003).	미상	현미경조사	Geologic map of the Hongcheon Fe-REE deposits (revised from Park and Lee, 2003).	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
368	carbonatite-phoscorite	Photomicrographs of fenite. A: fenite consisting mainly of albite (Ab), amphibole (Amp) and quartz (Qtz) replaced by carbonate (Ca) veinlets; cross nicol. B: quartz and albite containing abundant microcracks filled by carbonate phases; cross nicol.	미상	현미경조사	Photomicrographs of fenite. A: fenite consisting mainly of albite (Ab), amphibole (Amp) and quartz (Qtz) replaced by carbonate (Ca) veinlets; cross nicol. B: quartz and albite containing abundant microcracks filled by carbonate phases; cross nicol.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
369	carbonatite-phoscorite	Rock slab images of carbonatite-phoscorite rocks showing cogenetic relationship (a, b) and replacement texture (c, d).	미상	현미경조사	Rock slab images of carbonatite-phoscorite rocks showing cogenetic relationship (a, b) and replacement texture (c, d).	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
370	carbonatite-phoscorite	Photomicrographs of various stage of carbonatite. a: stage I consisting mainly of dolomite (Dol) and magnetite (Mt); cross. b: stage II replacing (dotted line) stage I carbonatite; cross. c: Back scattered electron image showing intergrowth texture of strontianite with dolomite in stage II. d: stage III consisting mainly of quartz (Qtz), Fe-carbonate accompanying columbite (Cm), magnetite and pyrite (Py); cross.	미상	현미경조사	Photomicrographs of various stage of carbonatite. a: stage I consisting mainly of dolomite (Dol) and magnetite (Mt); cross. b: stage II replacing (dotted line) stage I carbonatite; cross. c: Back scattered electron image showing intergrowth texture of strontianite with dolomite in stage II. d: stage III consisting mainly of quartz (Qtz), Fe-carbonate accompanying columbite (Cm), magnetite and pyrite (Py); cross.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
371	carbonatite-phoscorite	Photomicrographs of various stage of phoscorite. a: stage I consisting mainly of dolomite and magnetite; cross. b: stage II consisting of apatite, Fe-dolomite, and magnetite; cross. c: stage II represented by apatite replacing (dotted line) stage I phoscorite; cross. d: stage III consisting mainly of quartz, Fe-carbonate and magnetite; cross. Abbreviations are same as in Figure 5.	미상	현미경조사	Photomicrographs of various stage of phoscorite. a: stage I consisting mainly of dolomite and magnetite; cross. b: stage II consisting of apatite, Fe-dolomite, and magnetite; cross. c: stage II represented by apatite replacing (dotted line) stage I phoscorite; cross. d: stage III consisting mainly of quartz, Fe-carbonate and magnetite; cross. Abbreviations are same as in Figure 5.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
372	carbonatite-phoscorite	Histograms showing the variations of Fe content in carbonate minerals for different stages of carbonatite and phoscorite.	미상	현미경조사	Histograms showing the variations of Fe content in carbonate minerals for different stages of carbonatite and phoscorite.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
373	carbonatite-phoscorite	Mineral assemblage of carbonatite and phoscorite for different stages in the study area.	미상	현미경조사	Mineral assemblage of carbonatite and phoscorite for different stages in the study area.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
374	carbonatite-phoscorite	Compositional variation of Fe-carbonates for different stages in carbonatite and phoscorite from the Hongcheon Fe-REE deposits.	미상	현미경조사	Compositional variation of Fe-carbonates for different stages in carbonatite and phoscorite from the Hongcheon Fe-REE deposits.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
375	carbonatite-phoscorite	Comparison of phoscorite from Kola Alkaline Province and Hongcheon Complex.	미상	현미경조사	Comparison of phoscorite from Kola Alkaline Province and Hongcheon Complex.	홍천 카보나타이트-포스코라이트 복합체의 암석기재학 (지질학회지 Geol_v46n4p367)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
376	BJ-10Y_1.1~31.1	Geologic map of the Mungyeong area showing distribution of Sangnaeri Formation as well as Baekhwari Amphibolite. Sample locations for the SHRIMP U-Pb zircon age determinations are also shown.	SHRIMP-lie, Isoplot/Ex, Squid	연대측정	Geologic map of the Mungyeong area showing distribution of Sangnaeri Formation as well as Baekhwari Amphibolite. Sample locations for the SHRIMP U-Pb zircon age determinations are also shown.	문경지역 옥전변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거 (지질학회지 Geol_v47n2p155)	36.671833 128.036694

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
377	BJ-10Y_1.1~31.1	Photograph of the rock sample from the Sangnaeri Formation, used for the zircon separation of this study (left) and microphotograph of the thin-section of this sample; open nicol (middle) and crossed nicols (right). Scale bar of the microphotograph indicates 300 µm.	SHRIMP-lie, Isoplot/Ex, Squid	연대측정	Photograph of the rock sample from the Sangnaeri Formation, used for the zircon separation of this study (left) and microphotograph of the thin-section of this sample; open nicol (middle) and crossed nicols (right). Scale bar of the microphotograph indicates 300 µm.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거 (지질학회지 Geol_v47n2p155)	36.671833 128.036694
378	BJ-10Y_1.1~31.1	Cathodoluminescence images with spot U-Pb ages for the analyzed zircons from the Sangnaeri Formation. Isotopic ratios and apparent 206Pb/238U ages >1,000 Ma were calculated on the basis of 204Pb correction method, but apparent ages <1,000 Ma were calculated on the basis of 207Pb correction method (Williams, 1998).	SHRIMP-lie, Isoplot/Ex, Squid	연대측정	Cathodoluminescence images with spot U-Pb ages for the analyzed zircons from the Sangnaeri Formation. Isotopic ratios and apparent 206Pb/238U ages >1,000 Ma were calculated on the basis of 204Pb correction method, but apparent ages <1,000 Ma were calculated on the basis of 207Pb correction method (Williams, 1998).	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거 (지질학회지 Geol_v47n2p155)	36.671833 128.036694
379	BJ-10Y_1.1~31.1	Tera-Wasserburg plot for the zircons separated from the Sangnaeri Formation.	SHRIMP-lie, Isoplot/Ex, Squid	연대측정	Tera-Wasserburg plot for the zircons separated from the Sangnaeri Formation.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거 (지질학회지)	36.671833 128.036694
380	BJ-10Y_1.1~31.1	Concordia age obtained from the youngest populations of the zircons separated from the Sangnaeri Formation.	SHRIMP-lie, Isoplot/Ex, Squid	연대측정	Concordia age obtained from the youngest populations of the zircons separated from the Sangnaeri	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거 (지질학회지)	36.671833 128.036694
381	BJ-10Y_1.1~31.1	SHRIMP U-Pb zircon data of the Sangnaeri Formation in Mungyeong area, Korea.	SHRIMP-lie, Isoplot/Ex, Squid	연대측정	SHRIMP U-Pb zircon data of the Sangnaeri Formation in Mungyeong area, Korea.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거 (지질학회지)	36.671833 128.036694
382	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Generalized geological map of the Jeju Island showing (a) the present-day geodynamic setting along the eastern margin of Eurasian plate (after Tatsumi et al., 2005) and (b) stratigraphic relationships of volcanic rocks (after Lee, 1982 and Chang et al., 1999) showing sample locality (Sinsanri).	미상	현미경조사, 주성분분석	Generalized geological map of the Jeju Island showing (a) the present-day geodynamic setting along the eastern margin of Eurasian plate (after Tatsumi et al., 2005) and (b) stratigraphic relationships of volcanic rocks (after Lee, 1982 and Chang et al., 1999) showing sample locality (Sinsanri).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
383	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Modal composition and photography of thick section for the studied pyroxenite xenoliths from Sinsanri, Jeju Island. (a) Ternary diagram (Ol-Opx-Cpx) from Streckeisen (1976). (b) Olivine websterite and a very irregular contact with lherzolite (a dotted curve) is noted. (c) Websterite and (d) Clinopyroxenite and a contact with websterite (a dotted curve) is noted. Ol=olivine, Opx=orthopyroxene, Cpx= clinopyroxene.	미상	현미경조사, 주성분분석	Modal composition and photography of thick section for the studied pyroxenite xenoliths from Sinsanri, Jeju Island. (a) Ternary diagram (Ol-Opx-Cpx) from Streckeisen (1976). (b) Olivine websterite and a very irregular contact with lherzolite (a dotted curve) is noted. (c) Websterite and (d) Clinopyroxenite and a contact with websterite (a dotted curve) is noted. Ol=olivine, Opx=orthopyroxene, Cpx=	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
384	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Photomicrographs of pyroxenite xenoliths from Sinsanri, Jeju Island. Except photo "b" taken under plain-polarized light, all photos were taken under cross-polarized light. (a) Olivine websterite xenolith containing coarse-grained orthopyroxene with bended clinopyroxene lamellae and kink banding is noted. Fine-grained, recrystallized pyroxenes without exsolution lamella (top right and botton left in the photo) are also compared. (b) Olivine websterite xenolith showing spinel symplectite blebs in large clinopyroxene. Elongated orthopyroxene without exsolution lamella can be compared with the coarse-grained orthopyroxene in photo "a". (c) Websterite xenolith containing coarse-grained orthopyroxene with exsolution lamella in the center and lamella-free margin is noted. (d) Fine-grained orthopyroxene between coarse-grained clinopyroxene is shown with more linear grain boundaries compared with those in photo "a". (e) A single clinopyroxenite xenolith showing optical continuity, but different orientation of orthopyroxene exsolution lamellae is noted. Fine-grained orthopyroxene and clinopyroxene assemblages crosscutting the megacryst is also shown. (f) A irregular contact between clinopyroxene megacryst and websterite is noted. Orthopyroxene exsolution patch (a red arrow) or fine-grained pyroxene without internal deformation is shown and compared with large orthopyroxene with kink banding and exsolution lamella on the left. Ol= olivine, Opx=orthopyroxene, Cpx=clinopyroxene, Sp=spinel	미상	현미경조사, 주성분분석	Photomicrographs of pyroxenite xenoliths from Sinsanri, Jeju Island. Except photo "b" taken under plain-polarized light, all photos were taken under cross-polarized light. (a) Olivine websterite xenolith containing coarse-grained orthopyroxene with bended clinopyroxene lamellae and kink banding is noted. Fine-grained, recrystallized pyroxenes without exsolution lamella (top right and botton left in the photo) are also compared. (b) Olivine websterite xenolith showing spinel symplectite blebs in large clinopyroxene. Elongated orthopyroxene without exsolution lamella can be compared with the coarse-grained orthopyroxene in photo "a". (c) Websterite xenolith containing coarse-grained orthopyroxene with exsolution lamella in the center and lamella-free margin is noted. (d) Fine-grained orthopyroxene between coarse-grained clinopyroxene is shown with more linear grain boundaries compared with those in photo "a". (e) A single clinopyroxenite xenolith showing optical continuity, but	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
385	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of FeO, MnO and NiO vs MgO for olivine of olivine websterite xenoliths from Sinsanri, Jeju Island comparing with compositional range of olivine from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	현미경조사, 주성분분석	Plots of FeO, MnO and NiO vs MgO for olivine of olivine websterite xenoliths from Sinsanri, Jeju Island comparing with compositional range of olivine from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
386	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of Al ₂ O ₃ and MnO vs MgO for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of orthopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	현미경조사, 주성분분석	Plots of Al ₂ O ₃ and MnO vs MgO for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of orthopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
387	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of Al ₂ O ₃ , CaO, Na ₂ O and TiO ₂ vs MgO for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of clinopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	현미경조사, 주성분분석	Plots of Al ₂ O ₃ , CaO, Na ₂ O and TiO ₂ vs MgO for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of clinopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
388	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of Cr ₂ O ₃ and TiO ₂ vs MgO for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of spinel from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	현미경조사, 주성분분석	Plots of Cr ₂ O ₃ and TiO ₂ vs MgO for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of spinel from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
389	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Modal composition and lithology for the studied pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	현미경조사, 주성분분석	Modal composition and lithology for the studied pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
390	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for olivine of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	현미경조사, 주성분분석	Major element concentrations (wt.%) for olivine of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
391	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	현미경조사, 주성분분석	Major element concentrations (wt.%) for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
392	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	현미경조사, 주성분분석	Major element concentrations (wt.%) for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
393	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	현미경조사, 주성분분석	Major element concentrations (wt.%) for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성 (지질학회지 Geol_v48n4p299)	33.391389 126.856111; 33.391389 126.882778; 33.371389 126.882778; 33.371389 126.856111
394	YC650~834	Geological map of the Cheolwon basin, showing the section locations in near-proximal part (A, B, C, D, E, F, G, H, I) and near-medial part (J, K, L, M, N) in the Dongmakgol Tuff. Two dash lines represent the horizons of LT (lower bedded tuffs) and UT (upper bedded tuffs).	미상	미상	Geological map of the Cheolwon basin, showing the section locations in near-proximal part (A, B, C, D, E, F, G, H, I) and near-medial part (J, K, L, M, N) in the Dongmakgol Tuff. Two dash lines represent the horizons of LT (lower bedded tuffs) and UT (upper bedded tuffs).	철원분지 동막골층회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944
395	YC650~834	Cross section of field lithology zones, showing interior sequences of lower and upper bedded tuffs, and lower, middle and upper ignimberites in the Dongmakgol Tuff. SB represents the Sinseo Breccia.	미상	미상	Cross section of field lithology zones, showing interior sequences of lower and upper bedded tuffs, and lower, middle and upper ignimberites in the Dongmakgol Tuff. SB represents the Sinseo Breccia.	철원분지 동막골층회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
396	YC650~834	Photomicrographs of the Dongmakgol Tuff. (A) A pumice clast, originally showing highly vesicular texture in nonwelded tuff under plane light; (B) Crude vitroclastic fabric from recognition of shard structure in nonwelded tuff under plane light; (C) A slightly flattened pumice clast preserved in vitric material in partially welded tuff under plane light; (D) Same as above with crossed nicols, showing that the pumice is weakly devitrified into crude spherulites (gray areas); (E) Eutaxitic fabric from pumices (light streaks) and shards (dark streaks) molded against a crystal fragments in densely welded tuff under plane light, and crystallized along the boundary by cryptocrystalline axiolites that are too fine to see; (F) parataxitic fabric from shards and fiammes. crystallized by microcrystalline axiolites in rheomorphic tuff with crossed nicols. Pumice structure defined by outer microcrystalline axiolitic intergrowth, and partly destroyed by inner microcrystalline spherulitic crystallization (light areas).	미상	미상	Photomicrographs of the Dongmakgol Tuff. (A) A pumice clast, originally showing highly vesicular texture in nonwelded tuff under plane light; (B) Crude vitroclastic fabric from recognition of shard structure in nonwelded tuff under plane light; (C) A slightly flattened pumice clast preserved in vitric material in partially welded tuff under plane light; (D) Same as above with crossed nicols, showing that the pumice is weakly devitrified into crude spherulites (gray areas); (E) Eutaxitic fabric from pumices (light streaks) and shards (dark streaks) molded against a crystal fragments in densely welded tuff under plane light, and crystallized along the boundary by cryptocrystalline axiolites that are too fine to see; (F) parataxitic fabric from shards and fiammes. crystallized by microcrystalline axiolites in rheomorphic tuff with crossed nicols. Pumice structure defined by outer microcrystalline axiolitic intergrowth, and partly destroyed by inner microcrystalline spherulitic	철원분지 동막골용회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944
397	YC650~834	(A) Photomicrographs of pumice structures defined by outer microcrystalline axiolitic intergrowth, and inner coarser-grained spherulitic crystallization (light areas) in densely welded tuff with crossed nicols; (B) Same as above under plane light.	미상	미상	(A) Photomicrographs of pumice structures defined by outer microcrystalline axiolitic intergrowth, and inner coarser-grained spherulitic crystallization (light areas) in densely welded tuff with crossed nicols; (B) Same as above under plane light.	철원분지 동막골용회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944
398	YC650~834	Cross sections of welding zones (A) and crystallization zones (B). Alphabets and ticks at top show section localities (see Fig. 1). SB represents the Sinseo Breccia.	미상	미상	Cross sections of welding zones (A) and crystallization zones (B). Alphabets and ticks at top show section localities (see Fig. 1). SB represents the Sinseo Breccia.	철원분지 동막골용회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944
399	YC650~834	Physical characteristics of near-proximal parts of the Dongmakgol Tuff based on specimens and thin sections collected in Dosinri (A), Oksanri (B), Dongmakri (C), Seongsan (D), Gomunri (E), Bugok valley (F), Bugok ridge (G), Darakdae (H) and Munamdong(I) sections.	미상	미상	Physical characteristics of near-proximal parts of the Dongmakgol Tuff based on specimens and thin sections collected in Dosinri (A), Oksanri (B), Dongmakri (C), Seongsan (D), Gomunri (E), Bugok valley (F), Bugok ridge (G), Darakdae (H) and Munamdong(I) sections.	철원분지 동막골용회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
400	YC650~834	Physical characteristics of near-medial parts of the Dongmakgol Tuff based on specimens and thin sections collected in Jongjasan (J), Hyangrobong (K), Harangdong (L), Damteo ridge (M) and Damteo valley (E) sections.	미상	미상	Physical characteristics of near-medial parts of the Dongmakgol Tuff based on specimens and thin sections collected in Jongjasan (J), Hyangrobong (K), Harangdong (L), Damteo ridge (M) and Damteo valley (E) sections.	철원분지 동막골응회암의 용결상 및 결정 화상과 냉각과정 (지질학회지 Geol_v49n1p73)	38.250000 127.001944; 38.250000 127.251944; 38.000000 127.251944; 38.000000 127.001944
401	Sindo	Simplified geological map of Jeju Island with the outlines of lava flows and monogenetic volcanic cones and the locations of the cores (modified after Sohn and Park, 2005). Inset map shows the location of the island.	미상	코어시추, 주상도작성	Simplified geological map of Jeju Island with the outlines of lava flows and monogenetic volcanic cones and the locations of the cores (modified after Sohn and Park, 2005). Inset map shows the location of the island.	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211
402	Sindo	A) Columnar log of the lava flow units in the 160 m-long upper part of the Sindo core. B) Rough and rubbly surface of highly vesicular clinker occurs at the top of aa lava flow. C) Vertical coalescence of pipe vesicles developed in aa lava flow. D) Thin pahoehoe lava flows with vesicular top and bottom. E) Massive, dense and thick lava flows with rare vesicles.	미상	코어시추, 주상도작성	A) Columnar log of the lava flow units in the 160 m-long upper part of the Sindo core. B) Rough and rubbly surface of highly vesicular clinker occurs at the top of aa lava flow. C) Vertical coalescence of pipe vesicles developed in aa lava flow. D) Thin pahoehoe lava flows with vesicular top and bottom. E) Massive, dense and thick lava flows with	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211
403	Sindo	Lithofacies characteristics of depositional unit I. A) Columnar log of the 15 m-long unit I. B) A massive, volcanoclastic pebbly sandstone. (C, D) Stratified and poorly sorted volcanoclastic pebbly sandstone characterized alternating coarse-grained and fine-grained layer. Clasts are polymictic (basalt, mudstone and acidic volcanic rocks) and mostly subrounded to rounded.	미상	코어시추, 주상도작성	Lithofacies characteristics of depositional unit I. A) Columnar log of the 15 m-long unit I. B) A massive, volcanoclastic pebbly sandstone. (C, D) Stratified and poorly sorted volcanoclastic pebbly sandstone characterized alternating coarse-grained and fine-grained layer. Clasts are polymictic (basalt, mudstone and acidic volcanic rocks) and mostly subrounded to rounded.	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211
404	Sindo	A) Columnar log of the 60 m-long unit II. B) Well stratified tuff and bomb sag structure in the middle part of Ts. C) Partly laminated mudstone clasts with fluidal margin in LTm. D) Detailed view of the irregular jigsaw-fitted vesicular basalt clasts. Irregular clasts with ragged margin. E) Irregular mudstone clasts have jigsaw-fit margins and are set in greenish gray tuff matrix. F) Low angle cross-stratified tuff deposit.	미상	코어시추, 주상도작성	A) Columnar log of the 60 m-long unit II. B) Well stratified tuff and bomb sag structure in the middle part of Ts. C) Partly laminated mudstone clasts with fluidal margin in LTm. D) Detailed view of the irregular jigsaw-fitted vesicular basalt clasts. Irregular clasts with ragged margin. E) Irregular mudstone clasts have jigsaw-fit margins and are set in greenish gray tuff matrix. F) Low angle cross-stratified tuff deposit.	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211

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405	Sindo	A) Columnar log of the 70 m-long unit III. B) Detailed view of steep-inclined, stratified (lapilli) tuff, which commonly has an internal bedding inclined at an angle of 45° to 55°. (C to E) Steep-inclined, stratified lapilli tuff and tuff, consisting of alternations of cm-thick, basaltic lapilli-rich and lapilli-poor layers with steep bedding inclined at an angle of 50° to 60°. F) Steep-inclined, convoluted tuff layer in 270 to 272 m.	미상	코어시추, 주상도작성	A) Columnar log of the 70 m-long unit III. B) Detailed view of steep-inclined, stratified (lapilli) tuff, which commonly has an internal bedding inclined at an angle of 45° to 55°. (C to E) Steep-inclined, stratified lapilli tuff and tuff, consisting of alternations of cm-thick, basaltic lapilli-rich and lapilli-poor layers with steep bedding inclined at an angle of 50° to 60°. F) Steep-inclined, convoluted tuff layer in 270 to 272 m.	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211
406	Sindo	Distribution of the Seogwipo Formation in the subsurface of western Jeju Island. The Seogwipo Formation is anomalously thick in the Sindo core in contrast to the other cores.	미상	코어시추, 주상도작성	Distribution of the Seogwipo Formation in the subsurface of western Jeju Island. The Seogwipo Formation is anomalously thick in the Sindo core in contrast to the other cores.	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211
407	Sindo	Cartoons illustrating the hydrovolcanic activity and diatreme formation in the Sindo core site. (A) Explosive hydrovolcanic activity caused by the interaction of basaltic magma with the unconsolidated and probably water-saturated U Formation produces a tuff ring, which probably had a root zone near the base of the formation. An initial primary diatreme was formed by the partial collapse of the conduit wall and the mixing of magma and wet sediment, resulting in a complex zone of breccia composed of irregularly shaped basalt and mudstone clasts. (B) Large-scale collapse of the rim deposits and conduit wall rocks, triggered by slope instability and volcanic shockwaves, resulted in the formation of depositional unit III and the clogging of the vent. (C) The clogging of the vent made the ascending magma to follow a new route and erupt at a new vent site, resulting in a new tuff ring at a nearby vent site. (D) Part of the rim beds of the new tuff ring accumulated inside the crater of the older tuff ring, producing depositional unit II. Afterwards, reworked volcaniclastic deposits (unit I) and lava flows were superposed above the hydrovolcanic deposits.	미상	코어시추, 주상도작성	Cartoons illustrating the hydrovolcanic activity and diatreme formation in the Sindo core site. (A) Explosive hydrovolcanic activity caused by the interaction of basaltic magma with the unconsolidated and probably water-saturated U Formation produces a tuff ring, which probably had a root zone near the base of the formation. An initial primary diatreme was formed by the partial collapse of the conduit wall and the mixing of magma and wet sediment, resulting in a complex zone of breccia composed of irregularly shaped basalt and mudstone clasts. (B) Large-scale collapse of the rim deposits and conduit wall rocks, triggered by slope instability and volcanic shockwaves, resulted in the formation of depositional unit III and the clogging of the vent. (C) The clogging of the vent made the ascending magma to follow a new route and erupt at a new vent site, resulting in a new tuff ring at a nearby vent site. (D) Part of the rim beds of the new tuff ring accumulated inside the crater of the older tuff ring, producing depositional	제주도 서부 지하 화도충전암의 특징과 해석 (지질학회지 Geol_v49n5p537)	33.287297 126.176211; 33.287297 126.199297; 33.274553 126.199297; 33.274553 126.176211

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408	KJ72/146, HIS, AU22	(a) Geological map of the Yeongnam Massif (1:1,000,000 scale) (from Kee et al., 2020); (b) Geological map of the Gwangju-Jangseong area (modified from Choi et al., 1986; Hong and Yun, 1986; Lee, B et al., 2021); (c) Geological map of the Hwasun-Boseong area (modified from Lee and Kim, 1966). Yellow stars represent sample locations.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	(a) Geological map of the Yeongnam Massif (1:1,000,000 scale) (from Kee et al., 2020); (b) Geological map of the Gwangju-Jangseong area (modified from Choi et al., 1986; Hong and Yun, 1986; Lee, B et al., 2021); (c) Geological map of the Hwasun-Boseong area (modified from Lee and Kim, 1966). Yellow stars represent sample locations.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575
409	KJ72/146, HIS, AU22	(a) Photomicrograph of diatexite migmatite(KJ146) in the Jangseong area; (b) Photomicrograph of diatexite migmatite(HS1) in the Hwasun area. Abbreviations: Kfs, K-feldspar; Pl, plagioclase; Bt, biotite; Qz, quartz; Ms, muscovite.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	(a) Photomicrograph of diatexite migmatite(KJ146) in the Jangseong area; (b) Photomicrograph of diatexite migmatite(HS1) in the Hwasun area. Abbreviations: Kfs, K-feldspar; Pl, plagioclase; Bt, biotite; Qz, quartz; Ms, muscovite.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575
410	KJ72/146, HIS, AU22	(a, b) Cathodoluminescence images of zircon grains from diatexite migmatite in the Jangseong area; (c) back-scattered electron and (d) cathodoluminescence images of zircon grains from diatexite migmatite in the Hwasun area.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	(a, b) Cathodoluminescence images of zircon grains from diatexite migmatite in the Jangseong area; (c) back-scattered electron and (d) cathodoluminescence images of zircon grains from diatexite migmatite in the Hwasun area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575
411	KJ72/146, HIS, AU22	(a, b) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Gwangju-Jangseong area; (c, d) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Hwasun-Boseong area.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	(a, b) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Gwangju-Jangseong area; (c, d) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Hwasun-Boseong area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575
412	KJ72/146, HIS, AU22	Zircon U-Pb age distribution patterns of diatexite migmatite (a, b) in the Gwangju-Jangseong area and (c, d) in the Hwasun-Boseong area.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	Zircon U-Pb age distribution patterns of diatexite migmatite (a, b) in the Gwangju-Jangseong area and (c, d) in the Hwasun-Boseong area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575

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413	KJ72/146, HIS, AU22	The coordinates of the global positioning system for zircon age dating samples.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	The coordinates of the global positioning system for zircon age dating samples.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575
414	KJ72/146, HIS, AU22	The zircon age data of diatextite migmatite in Jangseong and Hawsun area.	isoplot 3.75, SQUID 2.50	SHRIMP, LA-MC-ICP-MS	The zircon age data of diatextite migmatite in Jangseong and Hawsun area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰 (지질학회지 Geol_v58n1p051)	35.333631 126.633575; 35.333631 126.955483; 35.077131 126.955483; 35.077131 126.633575
415	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	Regional geologic map including the Eunjeok-Sangeun mining district.	미상	ICP-AES	Regional geologic map including the Eunjeok-Sangeun mining district.	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111
416	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	through 3F. Photomicrographs for the wall rocks in the adits from the Eunjeok and Sangeun mines. Abbreviations: K-fd=K-feldspar, ser=sericite, qtz=quartz, pl=plagioclase, bt=biotite, py=pyrite, chl=chlorite, fd=feldspar, mt=magnetite.	미상	ICP-AES	through 3F. Photomicrographs for the wall rocks in the adits from the Eunjeok and Sangeun mines. Abbreviations: K-fd=K-feldspar, ser=sericite, qtz=quartz, pl=plagioclase, bt=biotite, py=pyrite, chl=chlorite, fd=feldspar, mt=magnetite.	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111
417	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	Sulfide mineral within quartz vein, (B) Arsenopyrite within quartz. vein.	미상	ICP-AES	Sulfide mineral within quartz vein, (B) Arsenopyrite within quartz. vein.	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111
418	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	(A) Adit sketch map of the Sangeun mine(1:200 scale), (B) Adit sketch map of the Eunjeok mine(1:200 scale).	미상	ICP-AES	(A) Adit sketch map of the Sangeun mine(1:200 scale), (B) Adit sketch map of the Eunjeok mine(1:200 scale).	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111
419	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	Mineralogical paragenesis from the Eunjeok and Sangeun mines.	미상	ICP-AES	Mineralogical paragenesis from the Eunjeok and Sangeun mines.	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
420	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	Reflected photomicrographs of ore specimens from the Eunjeok and Sangeun mines. (A) Galena(Gn) with chalcopyrite(Cp) disease in sphalerite(Sp), (B) Electrum(EL) coexisting with galena(Gn) infilling the fracture of quartz vein, (C) Argentite(Arg) coexisting with galena(Gn) infilling the fracture of quartz vein, (D) Pyrrhotite(Po) bleb and chalcopyrite(Cp) disease in sphalerite(Sp).	미상	ICP-AES	Reflected photomicrographs of ore specimens from the Eunjeok and Sangeun mines. (A) Galena(Gn) with chalcopyrite(Cp) disease in sphalerite(Sp), (B) Electrum(EL) coexisting with galena(Gn) infilling the fracture of quartz vein, (C) Argentite(Arg) coexisting with galena(Gn) infilling the fracture of quartz vein, (D) Pyrrhotite(Po) bleb and chalcopyrite(Cp) disease in	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111
421	EJ-3/4/7/8/10, SE-1(60m)-1/2, SE-2(40m), SE-entrance, SE-5-1, SE-6-1, SE-6-2, SE-6-3, SE-7-2, SE-8-1, SE-8-2, E-5	Analytical result of representative samples from the Eunjeok and Sangeun mines.	미상	ICP-AES	Analytical result of representative samples from the Eunjeok and Sangeun mines.	전남 영암지역 광상 재평가: 은적·상은 광산을 중심으로 (자원환경지질 Econ_v43n2p073)	34.796583 126.545278, 34.780972 126.550111
422	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	Location and simplified geological map of the studied Mo mineralized areas, Korea.	미상	Micromass 5400 static vacuum mass spectrometer	Location and simplified geological map of the studied Mo mineralized areas, Korea.	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
423	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	Geological map of the Jangsu Mo deposit and adjacent regions.	미상	Micromass 5400 static vacuum mass spectrometer	Geological map of the Jangsu Mo deposit and adjacent regions.	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
424	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	Geological map of the Geumseong Mo deposit and adjacent Jecheon-Danyang regions. 1=Guryeongri Mo-Fe deposit, 2=Dongmeyong W deposit and 3=Jungbo W-Mo deposit. JCG=Jecheon granite, CJG=Chungju granite, MAG=Muamsa granite, SSG=Susan granite and WAG= Weolaksan granite.	미상	Micromass 5400 static vacuum mass spectrometer	Geological map of the Geumseong Mo deposit and adjacent Jecheon-Danyang regions. 1=Guryeongri Mo-Fe deposit, 2=Dongmeyong W deposit and 3=Jungbo W-Mo deposit. JCG=Jecheon granite, CJG=Chungju granite, MAG=Muamsa granite, SSG=Susan granite and WAG= Weolaksan granite.	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
425	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	The Geumseong magnesian skarn(S)-cupola(C) contact aureole showing sampling site in K-feldspar zone (K) (drill hole GSM2006-3; ca, 260m). K-feldspar caps developed as a result of fractionation at the upper portions of a Mo-bearing cupola.	미상	Micromass 5400 static vacuum mass spectrometer	The Geumseong magnesian skarn(S)-cupola(C) contact aureole showing sampling site in K-feldspar zone (K) (drill hole GSM2006-3; ca, 260m). K-feldspar caps developed as a result of fractionation at the upper portions of a Mo-bearing cupola.	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
426	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	Geological map of the Geumeum Mo deposit and adjacent Pyeonghae regions.	미상	Micromass 5400 static vacuum mass spectrometer	Geological map of the Geumeum Mo deposit and adjacent Pyeonghae regions.	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
427	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	40Ar/39Ar step heating age spectra for muscovite collected from Mo-free quartz vein at the Geumeum deposit.	미상	Micromass 5400 static vacuum mass spectrometer	40Ar/39Ar step heating age spectra for muscovite collected from Mo-free quartz vein at the Geumeum deposit.	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
428	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	Geological map of the Yeonil Mo deposit and adjacent regions	미상	Micromass 5400 static vacuum mass spectrometer	Geological map of the Yeonil Mo deposit and adjacent regions	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
429	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	Age frequency of of Mo-W deposits in South Korea. Data compiled from Choi et al. (2006), Maruyama et al. (1997), Park et al.(1988a), Park et al.(1988b), Shimazaki et al. (1987), So et al. (1983), So et al., (1991) and So and Yun (1994).	미상	Micromass 5400 static vacuum mass spectrometer	Age frequency of of Mo-W deposits in South Korea. Data compiled from Choi et al. (2006), Maruyama et al. (1997), Park et al.(1988a), Park et al.(1988b), Shimazaki et al. (1987), So et al. (1983), So et al., (1991) and So and Yun (1994).	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
430	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	K-Ar ages of minerals from Mo deposits	미상	Micromass 5400 static vacuum mass spectrometer	K-Ar ages of minerals from Mo deposits	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
431	JS09-01-8, GSM26-3-18/26-03-21/26-3-24, SYB2606/2606-7, YI-1	40Ar/39Ar analyticaldata for incremental heating experiments on muscovite concentrates (SYB2805-A) from Mo-free quartz vein at the Geumeum deposit	미상	Micromass 5400 static vacuum mass spectrometer	40Ar/39Ar analyticaldata for incremental heating experiments on muscovite concentrates (SYB2805-A) from Mo-free quartz vein at the Geumeum deposit	남한의 주요 몰리브덴 광화작용과 화성활동 (자원환경지질 Econ_v44n2p109)	35.764003 127.564123; 37.079949 128.202526; 36.677179 129.418336; 35.858769 129.463477
432	Oeibri-1/2/3/4-1/4-2/4-3/5/6-1/6-2/6-3/7/8	General geological map of the Seongsanri, Bugokri and Oeibri area, Hwangsan-myeon, showing the orientation of the principal quartz veins, silicified zone and sampling locations(modified from Koh and Chang, 1997).	미상	미상	General geological map of the Seongsanri, Bugokri and Oeibri area, Hwangsan-myeon, showing the orientation of the principal quartz veins, silicified zone and sampling locations(modified from Koh and Chang, 1997).	전남 황산면 외입리일대 석영맥의 산상 (자원환경지질 Econ_v44n3p247)	34.568700 126.408214; 34.568700 126.427033; 34.545947 126.427033; 34.545947 126.408214
433	Oeibri-1/2/3/4-1/4-2/4-3/5/6-1/6-2/6-3/7/8	Photomicrographs of minerals from quartz vein. A; Electrum coexisting with pyrite, quartz and k-feldspar, B and C; Electrum coexisting with pyrite and quartz, D; Electrum and argentite coexisting with pyrite and quartz, E; Electrum and argentite coexisting with pyrite, quartz and k-feldspar and later calcite infilled into quartz., F; Argentite coexisting with quartz. Abbreviations: Arg; argentite, Ca; calcite, El; electrum, Fl; k-feldspar, Qz; quartz, Py; pyrite.	미상	미상	Photomicrographs of minerals from quartz vein. A; Electrum coexisting with pyrite, quartz and k-feldspar, B and C; Electrum coexisting with pyrite and quartz, D; Electrum and argentite coexisting with pyrite and quartz, E; Electrum and argentite coexisting with pyrite, quartz and k-feldspar and later calcite infilled into quartz., F; Argentite coexisting with quartz. Abbreviations: Arg; argentite, Ca; calcite, El; electrum, Fl; k-feldspar, Qz; quartz, Py; pyrite.	전남 황산면 외입리일대 석영맥의 산상 (자원환경지질 Econ_v44n3p247)	34.568700 126.408214; 34.568700 126.427033; 34.545947 126.427033; 34.545947 126.408214
434	Oeibri-1/2/3/4-1/4-2/4-3/5/6-1/6-2/6-3/7/8	Gold and silver grades of quartz veins from the Oeibri area	미상	미상	Gold and silver grades of quartz veins from the Oeibri area	전남 황산면 외입리일대 석영맥의 산상 (자원환경지질 Econ_v44n3p247)	34.568700 126.408214; 34.568700 126.427033; 34.545947 126.427033; 34.545947 126.408214
435	HNSS01/02, HNBG01/02, HNBA, HNOMS	Aerial photography of the Haenam area.	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	Aerial photography of the Haenam area.	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
436	HNSS01/02, HNBG01/02, HNBA, HNOMS	Schematic cross section of the generalized patterns of alteration in high- and low-sulfidation epithermal system, showing the representative spatial distribution of hydrothermal alteration zone from centered up-flow zone(A. High sulfidation system: Hedenquist et al., 2000; B. Low sulfidation system: Stoffregen, 1987).	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	Schematic cross section of the generalized patterns of alteration in high- and low-sulfidation epithermal system, showing the representative spatial distribution of hydrothermal alteration zone from centered up-flow zone(A. High sulfidation system: Hedenquist et al., 2000; B. Low	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
437	HNSS01/02, HNBG01/02, HNBA, HNOMS	General geological map of the Haenam area, southwestern part of South Korea, showing the general geology, structure, mining area, and alunite occurrence (Modified from Bowden, 2007). Abbreviation: Avdb=altered volcaniclastic debris flow breccia, Hms=Haenam mudstone and siltstone, HV=Hwangsang volcaniclastics, Ic2=igneous complex 2, Ic3=igneous complex 3, Qa=Alluvium.	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	General geological map of the Haenam area, southwestern part of South Korea, showing the general geology, structure, mining area, and alunite occurrence (Modified from Bowden, 2007). Abbreviation: Avdb=altered volcaniclastic debris flow breccia, Hms=Haenam mudstone and siltstone, HV=Hwangsang volcaniclastics, Ic2=igneous complex 2, Ic3=igneous	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
438	HNSS01/02, HNBG01/02, HNBA, HNOMS	A. Laboratory spectra of muscovite, kaolinite, epidote, chlorite, calcite, and alunite that are representative hydrothermal minerals (Clark et al., 1993). Alunite and Kaolinite are typically associated with argillic altered rocks, muscovite is typically associated with phyllic altered rocks. Epidote, chlorite, and calcite are typically associated with propylitic altered rocks. B. Laboratory spectra of limonite, jarosite, hematite, and goethite, which are common supergene minerals in epithermal system (Mars and Rowan, 2006). C. Spectra re-sampling of representative hydrothermal minerals in epithermal system to ASTER bandpass.	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	A. Laboratory spectra of muscovite, kaolinite, epidote, chlorite, calcite, and alunite that are representative hydrothermal minerals (Clark et al., 1993). Alunite and Kaolinite are typically associated with argillic altered rocks, muscovite is typically associated with phyllic altered rocks. Epidote, chlorite, and calcite are typically associated with propylitic altered rocks. B. Laboratory spectra of limonite, jarosite, hematite, and goethite, which are common supergene minerals in epithermal system (Mars and Rowan, 2006). C. Spectra re-sampling of representative hydrothermal minerals in epithermal	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
439	HNSS01/02, HNBG01/02, HNBA, HNOMS	The X-ray powder diffraction patterns of representative argillic-altered rocks from the Haenam area. Abbreviations: A= alunite, D= dickite, HNBA= Baekam, HNBG= Bugok, HNOMS= Okmaesan, HNSS= Ssongsan, K=kaolinite, Q= quartz.	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	The X-ray powder diffraction patterns of representative argillic-altered rocks from the Haenam area. Abbreviations: A= alunite, D= dickite, HNBA= Baekam, HNBG= Bugok, HNOMS= Okmaesan, HNSS= Ssongsan, K=kaolinite, Q=	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
440	HNSS01/02, HNBG01/02, HNBA, HNOMS	Results of band combination and band ratio transformation model for alunite occurrences in red.	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	Results of band combination and band ratio transformation model for alunite occurrences in red.	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
441	HNSS01/02, HNBG01/02, HNBA, HNOMS	Results of band combination and band ratio transformation model for dickite-kaolinite occurrences in purple.	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	Results of band combination and band ratio transformation model for dickite-kaolinite occurrences in purple.	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900

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442	HNSS01/02, HNBG01/02, HNBA, HNOMS	Results of quantitative XRD analyses of the representative argillic-altered rocks from the Haenam area	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	Results of quantitative XRD analyses of the representative argillic-altered rocks from the Haenam area	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
443	HNSS01/02, HNBG01/02, HNBA, HNOMS	ASTER spectra bandpass	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	ASTER spectra bandpass	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
444	HNSS01/02, HNBG01/02, HNBA, HNOMS	Representative mean band ratio values of hydrothermal minerals from the Haenam area	Siroquant v.3.0 프로그램, Envi ver 4.8 프로그램 (ASTER밴드 분석)	X선회절분석, ERSDAC 위성 ASTER밴드	Representative mean band ratio values of hydrothermal minerals from the Haenam area	ASTER 분광분석을 통한 해남지역 강고령 토변질 암석의 식별 (자원환경지질 Econ_v44n6p463)	34.584278 126.353900; 34.584278 126.424911; 34.526797 126.424911; 34.526797 126.353900
445	8-11/11-1/12/5- 1/12-1/9-1/13, 16(2)-4, 17(2)-3	Generalized geological map of the study area showing sampling sites and stratigraphic relationships of rocks and the location of the Gagok mine (after Yun and Einaudi, 1982). Seven samples "8-5-1, 8-9-1, 8-11, 8-11-1, 8-12, 8-12-1, and 8-13" are recovered from the Sengok area and two samples "16(2)-4 and 17(2)-3" from the Geumgok area.	미상	유도분극측정	Generalized geological map of the study area showing sampling sites and stratigraphic relationships of rocks and the location of the Gagok mine (after Yun and Einaudi, 1982). Seven samples "8-5-1, 8-9-1, 8-11, 8-11-1, 8-12, 8-12-1, and 8-13" are recovered from the Sengok area and two samples "16(2)-4 and 17(2)-3" from the Geumgok area.	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
446	8-11/11-1/12/5- 1/12-1/9-1/13, 16(2)-4, 17(2)-3	Photomicrographs of Group I rock samples from the Gagok mine: (a) Amphibole, pyrrhotite and magnetite are coexisting with fluorite inclusions, possibly indicating the small grains of fluorite as a previous remnants. (b) Relatively coarse-grained, pleochroic amphibole and pyrrhotite with minor amount of scheelite are noted. (c, d) Rare chalcopryrite with sphalerite inclusion rimmed by pyrrhotite is noted. Photos "a and c" from reflected light and "c" from plain-polarized light. Photo "d" is a back-scattered SEM image. amp=amphibole, chal=chalocopyrite, fl=fluorite, mt=magnetite, pyrr=pyrrhotite, sch=scheelite, sph=sphalerite	미상	유도분극측정	Photomicrographs of Group I rock samples from the Gagok mine: (a) Amphibole, pyrrhotite and magnetite are coexisting with fluorite inclusions, possibly indicating the small grains of fluorite as a previous remnants. (b) Relatively coarse-grained, pleochroic amphibole and pyrrhotite with minor amount of scheelite are noted. (c, d) Rare chalcopryrite with sphalerite inclusion rimmed by pyrrhotite is noted. Photos "a and c" from reflected light and "c" from plain-polarized light. Photo "d" is a back-scattered SEM image. amp=amphibole, chal=chalocopyrite, fl=fluorite, mt=magnetite, pyrr=pyrrhotite,	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
447	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	Photomicrographs of Group II rock samples from the Gagok mine: (a) Rhodonite filling the residual space between garnets are noted. (b) Calcite-quartz-pyrrhotite vein crosscutting the massive garnet and fine-grained clinopyroxene. Relatively abundant fluorite is also characteristic in the Group II samples. (c, d) Another calcite-quartz-pyrrhotite vein with magnetite and scheelite is present. Photos "a and b" from plain-polarized light and "c" from reflected light. Photo "d" is a BSE image. gat=garnet, rhod=rhodonite, ca=calcite, qz=quartz, fl=fluorite, cpx=clinopyroxene, pyrr=pyrrhotite, sch=scheelite, amp=amphibole, mt=magnetite.	미상	유도분극측정	Photomicrographs of Group II rock samples from the Gagok mine: (a) Rhodonite filling the residual space between garnets are noted. (b) Calcite-quartz-pyrrhotite vein crosscutting the massive garnet and fine-grained clinopyroxene. Relatively abundant fluorite is also characteristic in the Group II samples. (c, d) Another calcite-quartz-pyrrhotite vein with magnetite and scheelite is present. Photos "a and b" from plain-polarized light and "c" from reflected light. Photo "d" is a BSE image. gat=garnet, rhod=rhodonite, ca=calcite, qz=quartz, fl=fluorite, cpx=clinopyroxene, pyrr=pyrrhotite, sch=scheelite, amp=amphibole,	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
448	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	Photomicrographs of Group III rock samples from the Gagok mine: (a) Both coarse-grained and fine-grained clinopyroxene are present as interstitial phases between massive garnet grains. (b) Fine-grained pyrrhotite vein crosscutting the fine-grained clinopyroxene and magnetite assemblages are noted. (c) Sphalerite present in the inner side of magnetite are characteristic in the Group III samples. (d) Anhedral galena are disseminated. Photos "a and b" from cross-polarized light, "c" from plain-polarized light and "d" from reflected light. cpx=clinopyroxene, gat=garnet, pyrr=pyrrhotite, mt=magnetite, sph=sphalerite, gal=galena.	미상	유도분극측정	Photomicrographs of Group III rock samples from the Gagok mine: (a) Both coarse-grained and fine-grained clinopyroxene are present as interstitial phases between massive garnet grains. (b) Fine-grained pyrrhotite vein crosscutting the fine-grained clinopyroxene and magnetite assemblages are noted. (c) Sphalerite present in the inner side of magnetite are characteristic in the Group III samples. (d) Anhedral galena are disseminated. Photos "a and b" from cross-polarized light, "c" from plain-polarized light and "d" from reflected light. cpx=clinopyroxene, gat=garnet, pyrr=pyrrhotite, mt=magnetite,	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
449	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	Photomicrographs showing the relative grain sizes for the sulfide minerals from Group I (photo "a"), through II (photo "b") to III samples (photo "a"). All photos from reflected light in the same scale except for "c" in a magnified scale.	미상	유도분극측정	Photomicrographs showing the relative grain sizes for the sulfide minerals from Group I (photo "a"), through II (photo "b") to III samples (photo "a"). All photos from reflected light in the same scale except for "c" in a magnified scale.	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
450	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	The relationships between the modal% and grain sizes of the major ore minerals and frequency domain phase spectra. (a) Frequency domain phase spectra for nine Group I, II, III rock samples. (b) Total opaque minerals (modal % from Table 1), (c) modal % of pyrrhotite, and (d) grain size of pyrrhotite as a function of the phase difference. For each sample, dominant grain size is classified MC, M and F in Table 2, 1=F; 2=M; 3=MC.	미상	유도분극측정	The relationships between the modal% and grain sizes of the major ore minerals and frequency domain phase spectra. (a) Frequency domain phase spectra for nine Group I, II, III rock samples. (b) Total opaque minerals (modal % from Table 1), (c) modal % of pyrrhotite, and (d) grain size of pyrrhotite as a function of the phase difference. For each sample, dominant grain size is classified MC, M and F in	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
451	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	The relationships between the modal% and grain sizes of the major gangue minerals and frequency domain phase spectra. (a) Frequency domain phase spectra for nine Group I, II, III rock samples. (b) Modal % of amphibole, (c) clinopyroxene, and (d) garnet as a function of the phase difference.	미상	유도분극측정	The relationships between the modal% and grain sizes of the major gangue minerals and frequency domain phase spectra. (a) Frequency domain phase spectra for nine Group I, II, III rock samples. (b) Modal % of amphibole, (c) clinopyroxene, and (d) garnet as a function of the phase difference.	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
452	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	Modal composition (modal vol%) for the studied specimens from the Gagok Pb-Zn deposits	미상	유도분극측정	Modal composition (modal vol%) for the studied specimens from the Gagok Pb-Zn deposits	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
453	8-11/11-1/12/5-1/12-1/9-1/13, 16(2)-4, 17(2)-3	Grain size (mm) of the constituent minerals for the studied specimens from the Gagok Pb-Zn deposits	미상	유도분극측정	Grain size (mm) of the constituent minerals for the studied specimens from the Gagok Pb-Zn deposits	가곡 스카른 광상의 암석시료에 대한 광물특성과 광대역 유도분극 반응과의 관련성 (자원환경지질 Econ_v45n4p351)	37.126944 129.108056; 37.126944 129.160833; 37.096667 129.160833; 37.096667 129.108056
454	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Geological map of the study area in the southeastern part of Korea.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Geological map of the study area in the southeastern part of Korea.	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
455	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Mineral compositions of the fault rock samples measured by XRD.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Mineral compositions of the fault rock samples measured by XRD.	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
456	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Photomicrographs of thin sections of fault rocks. (a) Photomicrograph of sample A100 in the breccia zone. (b) Photomicrograph of sample A30 in the breccia zone. (c) Photomicrograph of sample B5-5 in the gouge zone. (d) Photomicrograph of bluish gray gouge sample. The lenticular old gouge fragment arranged along foliated structures in the gouge and it consists of rock-forming minerals fractured, iron hydroxide precipitated and clay mineral arranged. (e) Photomicrograph of bluish gray gouge sample. Old gouge fragment divided and moved by microfault in the matrix. (f) Photomicrograph of greenish yellow gouge sample. Iron grains are arranged and deposited along the clay foliation in the matrix. The major axis of particles and the foliation are more or less parallel.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Photomicrographs of thin sections of fault rocks. (a) Photomicrograph of sample A100 in the breccia zone. (b) Photomicrograph of sample A30 in the breccia zone. (c) Photomicrograph of sample B5-5 in the gouge zone. (d) Photomicrograph of bluish gray gouge sample. The lenticular old gouge fragment arranged along foliated structures in the gouge and it consists of rock-forming minerals fractured, iron hydroxide precipitated and clay mineral arranged. (e) Photomicrograph of bluish gray gouge sample. Old gouge fragment divided and moved by microfault in the matrix. (f) Photomicrograph of greenish yellow gouge sample. Iron grains are arranged and deposited along the clay foliation in the matrix. The major axis of particles	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
457	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Particle size distribution of the fault rock samples measured by microscope. Log-log graphs show the relationship between grain size and number of remaining particles in fault rocks.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Particle size distribution of the fault rock samples measured by microscope. Log-log graphs show the relationship between grain size and number of remaining particles in fault rocks.	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
458	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	The process of image analysis by Image J. (a) After the image was loaded on the program [File - Open] and changed into monochrome [Image - Type - 8-bit]. (b) Pick the particle to be measured for an area in the monochrome image [Image - Adjust - Threshold]. (c) Grains are divided by shading ratio of grains [Process - Binary - Watershed]. (d) Set up a scale through "Straight" in the program [Analyze - Set Scale - Distance in pixels, Known distance, Unit of length]. Distance in pixels - length data(pixel-unit) of a grain which is automatically chosen part by "Straight". Known distance - real length of a grain in the image. Unit of length - Unit of a real length. After set up a scale, the area of each grain is measured [Analyze - Analyze Particles].	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	The process of image analysis by Image J. (a) After the image was loaded on the program [File - Open] and changed into monochrome [Image - Type - 8-bit]. (b) Pick the particle to be measured for an area in the monochrome image [Image - Adjust - Threshold]. (c) Grains are divided by shading ratio of grains [Process - Binary - Watershed]. (d) Set up a scale through "Straight" in the program [Analyze - Set Scale - Distance in pixels, Known distance, Unit of length]. Distance in pixels - length data(pixel-unit) of a grain which is automatically chosen part by "Straight". Known distance - real length of a grain in the image. Unit of length - Unit of a real length. After set up a scale, the area of each grain is measured [Analyze -	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
459	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Particle size distribution of the fault rock samples measured by program Image J.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Particle size distribution of the fault rock samples measured by program Image J.	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
460	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Particle size distribution of the fault rock samples measured by laser particle analysis.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Particle size distribution of the fault rock samples measured by laser particle analysis.	경주시 양북면 단층암의 광물 조성과 입도 분포 특성 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
461	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Schematic models of development of fault rocks during progressive faulting. (a) Formation of damage zone. (b) Breccia zone formed by continuous fracturing while gouge zone evolved from a part of breccia zone. (c) Widening of fault core zone which includes breccia and gouge zones. (d) Schematic model of particle size and shape in fault zone. (e) Distribution of fractal dimensions according to the positions in the fault zone. (f) Distribution of relative proportions of clay and rock-forming minerals according to the positions in the fault zone. A sketch showing the proposed evolution of the cataclastic fabric with increasing displacement. (1) Shapes of mineral grains in the early stage of breccia formation. (2) During the active stage of breccia formation, fracturing of grains takes place. (3) Shape and arrangement of mineral grains during latest stage of the formation of fault gouge.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Schematic models of development of fault rocks during progressive faulting. (a) Formation of damage zone. (b) Breccia zone formed by continuous fracturing while gouge zone evolved from a part of breccia zone. (c) Widening of fault core zone which includes breccia and gouge zones. (d) Schematic model of particle size and shape in fault zone. (e) Distribution of fractal dimensions according to the positions in the fault zone. (f) Distribution of relative proportions of clay and rock-forming minerals according to the positions in the fault zone. A sketch showing the proposed evolution of the cataclastic fabric with increasing displacement. (1) Shapes of mineral grains in the early stage of breccia formation. (2) During the active stage of breccia formation, fracturing of grains takes place. (3) Shape and arrangement of mineral grains during latest stage of the formation of fault	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
462	A100/30, B1/2/3/4-1-2/5-5/5-g/5-b/6/7	Comparison of three different methods applied for measuring fractal dimension(D) in sample B5-5. D-values gradually increase from length to volume probably due to difference in the size range and total numbers of particles measured.	siroquant V3.0 프로그램, Image J 이미지입도 분석 프로그램	XRD, 현미경조사, 레이저입도분석	Comparison of three different methods applied for measuring fractal dimension(D) in sample B5-5. D-values gradually increase from length to volume probably due to difference in the size range and total numbers of particles measured.	경주시 양북면 단층암의 광물 조성과 입도 분포 특징 (자원환경지질 Econ_v45n5p487)	35.738167 129.475750;
463	72/76/77/80.4/82	Geologic map showing the distribution of the Joseon and Ogcheon supergroups in the Ogcheon (Okchon) Belt, South Korea. The Cambro-Ordovician Joseon Supergroup is mainly distributed in the Taebaeksan Basin. The study area includes the limb of the Backunsan (Baekunsan) Syncline, Taebaeksan Basin. Abbreviations in the index map: GB-Gyeongsang (Kyongsang) Basin; GM-Gyeonggi (Kyonggi) Massif; IB-Imjingang Belt; OB-Ogchon (Okcheon) Basin; TB-Taebaeksan (Taebaeksan) Basin; YM- Yeongnam Massif.	미상	시료채취, 구성성분분석, 현미경조사	Geologic map showing the distribution of the Joseon and Ogcheon supergroups in the Ogcheon (Okchon) Belt, South Korea. The Cambro-Ordovician Joseon Supergroup is mainly distributed in the Taebaeksan Basin. The study area includes the limb of the Backunsan (Baekunsan) Syncline, Taebaeksan Basin. Abbreviations in the index map: GB-Gyeongsang (Kyongsang) Basin; GM-Gyeonggi (Kyonggi) Massif; IB-Imjingang Belt; OB-Ogchon (Okcheon) Basin; TB-Taebaeksan (Taebaeksan) Basin; YM- Yeongnam	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
464	72/76/77/80.4/82	Lithostratigraphic nomenclature of the lower Paleozoic Joseon Supergroup in the Taebaeksan Basin.	미상	시료채취, 구성성분분석, 현미경조사	Lithostratigraphic nomenclature of the lower Paleozoic Joseon Supergroup in the Taebaeksan Basin.	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
465	72/76/77/80.4/82	Middle to Upper Cambrian lithostratigraphic and biostratigraphic correlation between the Taebaeksan Basin, North China, and Launrentia based on the trilobite biostratigraphy. Gray part: depositional hiatus. Modified from Palmer (1981).	미상	시료채취, 구성성분분석, 현미경조사	Middle to Upper Cambrian lithostratigraphic and biostratigraphic correlation between the Taebaeksan Basin, North China, and Launrentia based on the trilobite biostratigraphy. Gray part: depositional hiatus. Modified from Palmer (1981).	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
466	72/76/77/80.4/82	Index map (left) of the study area and detailed geologic map (right) of Dongjeom area in the Taebaeksan Basin. Modified from Geological Investigation Corps of the Taebaegsan Region (1962).	미상	시료채취, 구성성분분석, 현미경조사	Index map (left) of the study area and detailed geologic map (right) of Dongjeom area in the Taebaeksan Basin. Modified from Geological Investigation Corps of the Taebaegsan Region (1962).	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
467	72/76/77/80.4/82	Detailed columnar section of the Sesong Formation at Dongjeom.	미상	시료채취, 구성성분분석, 현미경조사	Detailed columnar section of the Sesong Formation at Dongjeom.	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
468	72/76/77/80.4/82	Outcrop photograph of the boundary between medium-grained sandstone (MS) and fine-grained sandstone (FS) at Dongjeom. B and C. Photomicrographs of MS (B) and FS (C). Q: quartz, F: feldspar.	미상	시료채취, 구성성분분석, 현미경조사	Outcrop photograph of the boundary between medium-grained sandstone (MS) and fine-grained sandstone (FS) at Dongjeom. B and C. Photomicrographs of MS (B) and FS (C). Q: quartz, F: feldspar.	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
469	72/76/77/80.4/82	Classification diagram (Okada, 1971) of sandstones from the Sesong Formation at Dongjeom. Q: quartz, F: feldspar, R: rock fragment.	미상	시료채취, 구성성분분석, 현미경조사	Classification diagram (Okada, 1971) of sandstones from the Sesong Formation at Dongjeom. Q: quartz, F: feldspar, R: rock fragment.	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
470	72/76/77/80.4/82	Simplified columnar section of the sesong Formation showing the stratigraphic relationships with the underlying Daegi and overlying Hwajeol formations at Dongjeom. SB: sequence boundary.	미상	시료채취, 구성성분분석, 현미경조사	Simplified columnar section of the sesong Formation showing the stratigraphic relationships with the underlying Daegi and overlying Hwajeol formations at Dongjeom. SB: sequence	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
471	72/76/77/80.4/82	Modal composition of sandstones from the Sesong Formation given as percentage of total minerals. Sample No. indicates meters starting from the bottom of columnar sections at Dongjeom	미상	시료채취, 구성성분분석, 현미경조사	Modal composition of sandstones from the Sesong Formation given as percentage of total minerals. Sample No. indicates meters starting from the bottom of columnar sections at	태백산분지 캄브리아기 세송층의 퇴적상 (자원환경지질 Econ_v45n5p565)	37.089722 129.044722; 37.089722 129.046389; 37.085000 129.046389; 37.085000 129.044722
472	JG-1~7	Generalized geological map(A) and idealized N-S cross section(B) of the Janggun lead-zinc-silver deposit(modified from Lee et al., 1990).	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Generalized geological map(A) and idealized N-S cross section(B) of the Janggun lead-zinc-silver deposit(modified from Lee et al., 1990).	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
473	JG-1~7	Mineral assemblage of lead-zinc-silver ore vein and wallrock alteration from the Janggun lead-zinc-silver deposit. The bold lines indicate high abundance, the thin lines represent the minor amounts.	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Mineral assemblage of lead-zinc-silver ore vein and wallrock alteration from the Janggun lead-zinc-silver deposit. The bold lines indicate high abundance, the thin lines represent the minor amounts.	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
474	JG-1~7	Major elements (wt.%) of wallrock and altered rocks from the Janggun Pb-Zn-Ag deposit	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Major elements (wt.%) of wallrock and altered rocks from the Janggun Pb-Zn-Ag deposit	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
475	JG-1~7	Minor elements (ppm) of wallrock and altered rocks from the Janggun Pb-Zn-Ag deposit	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Minor elements (ppm) of wallrock and altered rocks from the Janggun Pb-Zn-Ag deposit	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
476	JG-1~7	Correlation coefficients among major and trace elements of dolomite and altered rocks from the Janggun Pb-Zn-Ag deposit	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Correlation coefficients among major and trace elements of dolomite and altered rocks from the Janggun Pb-	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
477	JG-1~7	Correlation coefficients among major and trace elements of limestone and altered rocks from the Janggun Pb-Zn-Ag deposit	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Correlation coefficients among major and trace elements of limestone and altered rocks from the Janggun Pb-	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
478	JG-1~7	Gains and losses of major (wt.%), trace and rare earth elements (ppm) of the altered zone from the Janggun Pb-Zn-Ag deposit	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Gains and losses of major (wt.%), trace and rare earth elements (ppm) of the altered zone from the Janggun Pb-Zn-Ag deposit	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
479	JG-1~7	Gains and losses of major (wt.%), trace and rare earth elements (ppm) of the altered zone from the Janggun Pb-Zn-Ag deposit	미상	PIMA, XRD, EPMA, ICP, INAA, ICP-MS, XRF, Infrared technology	Gains and losses of major (wt.%), trace and rare earth elements (ppm) of the altered zone from the Janggun Pb-Zn-Ag deposit	장군 연-아연-은 광상의 모암변질에 따른 원소분산 (자원환경지질 Econ_v45n6p623)	36.858775 129.060808
480	CJ-1~56	Geologic map of the study area. modified after Kim and Lee (1965), Kim et al. (1995) and Koh et al. (2005).	미상	EPMA, 방사능측정	Geologic map of the study area. modified after Kim and Lee (1965), Kim et al. (1995) and Koh et al. (2005).	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
481	CJ-1~56	Irregular REE ore bodies confirmed by Koh et al. (2011). Red box area includes pegmatite hosted REE deposit and each number stands for sampling number.	미상	EPMA, 방사능측정	Irregular REE ore bodies confirmed by Koh et al. (2011). Red box area includes pegmatite hosted REE deposit and each number stands for sampling number.	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
482	CJ-1~56	Representative ore slaps (A, C and E) and microphotographs of metavolcanic hosted REE ores (B, D and F).	미상	EPMA, 방사능측정	Representative ore slaps (A, C and E) and microphotographs of metavolcanic hosted REE ores (B, D and F).	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
483	CJ-1~56	Microphotographs of pegmatite hosted REE ores (A: under crossed nicol, B: under open nicol). Abbreviation = Fgn: fergusonite, Kar: karnasurtite, Zr: zircon, Fl: fluorite.	미상	EPMA, 방사능측정	Microphotographs of pegmatite hosted REE ores (A: under crossed nicol, B: under open nicol). Abbreviation = Fgn: fergusonite, Kar: karnasurtite, Zr: zircon, Fl: fluorite.	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
484	CJ-1~56	Back-scattered electron image (BEI) of pegmatite-hosted REE ores. Abbreviation = Kar: karnasurtite, To: thorite, Fgn: fergusonite, Zr: zircon.	미상	EPMA, 방사능측정	Back-scattered electron image (BEI) of pegmatite-hosted REE ores. Abbreviation = Kar: karnasurtite, To: thorite, Fgn: fergusonite, Zr: zircon.	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
485	CJ-1~56	Microphotographs of metavolcanic-hosted REE ores. Abbreviation = Spn: sphene, An: allanite, Mt: magnetite, Zr: zircon, Amp: amphibole.	미상	EPMA, 방사능측정	Microphotographs of metavolcanic-hosted REE ores. Abbreviation = Spn: sphene, An: allanite, Mt: magnetite, Zr: zircon, Amp: amphibole.	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
486	CJ-1~56	Variation diagram for the allanite. A: TREO versus Fe ₂ O ₃ , B: TREO versus CaO, C: TREO versus CaO+ThO ₂ , and D: Al ₂ O ₃ versus Fe ₂ O ₃ .	미상	EPMA, 방사능측정	Variation diagram for the allanite. A: TREO versus Fe ₂ O ₃ , B: TREO versus CaO, C: TREO versus CaO+ThO ₂ , and D: Al ₂ O ₃ versus Fe ₂ O ₃ .	충주 오래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
487	CJ-1~56	REE-Ca-Th diagram (unit: %; modified from Chesner and Ettlinger, 1989).	미상	EPMA, 방사능측정	REE-Ca-Th diagram (unit: %; modified from Chesner and Ettlinger, 1989).	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
488	CJ-1~56	Chondrite-normalized REE patterns for the allanite (normalizing data from boynton, 1984).	미상	EPMA, 방사능측정	Chondrite-normalized REE patterns for the allanite (normalizing data from boynton, 1984).	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
489	CJ-1~56	REE versus Al(cations per formula unit) diagram showing the chemical relationships in the system allaniteferriallanite-epidote-clinozoisite. lines radiating from the clinozoisite endmember represent lines of constant Feoxidation state and are labeled for Fe3+/Fetotal. This diagram, introduced by Petrik et al. (1995), can be used to estimate the proportions of Fe2+ and Fe3+ in compositions within this chemical system.	미상	EPMA, 방사능측정	REE versus Al(cations per formula unit) diagram showing the chemical relationships in the system allaniteferriallanite-epidote-clinozoisite. lines radiating from the clinozoisite endmember represent lines of constant Feoxidation state and are labeled for Fe3+/Fetotal. This diagram, introduced by Petrik et al. (1995), can be used to estimate the proportions of Fe2+ and Fe3+ in compositions within this chemical system.	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
490	CJ-1~56	Variation diagram for the fergusonite. A: Y versus Ca+Th, B: Nb versus Ti+Ta+Fe, and C: Y2O3 versus Nb2O5.	미상	EPMA, 방사능측정	Variation diagram for the fergusonite. A: Y versus Ca+Th, B: Nb versus Ti+Ta+Fe, and C: Y2O3 versus Nb2O5.	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
491	CJ-1~56	Variation diagram for the karnasurtite. A: TiO2 versus SiO2, B: ThO2 versus La2O3+Ce2O3, C: Nb2O3 versus TiO2, D=Fe2O3 versus Al2O3, and E: TR2O3 versus TiO2+Fe2O3.	미상	EPMA, 방사능측정	Variation diagram for the karnasurtite. A: TiO2 versus SiO2, B: ThO2 versus La2O3+Ce2O3, C: Nb2O3 versus TiO2, D=Fe2O3 versus Al2O3, and E: TR2O3 versus TiO2+Fe2O3.	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
492	CJ-1~56	Microprobe analyses of allanite from the metavolcanic-hosted REE ore (wt%)	미상	EPMA, 방사능측정	Microprobe analyses of allanite from the metavolcanic-hosted REE ore (wt%)	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
493	CJ-1~56	Microprobe analyses of fergusonite from the pegmatite (wt%)	미상	EPMA, 방사능측정	Microprobe analyses of fergusonite from the pegmatite (wt%)	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
494	CJ-1~56	Microprobe analyses of karnasurtite and Thorite from the pegmatite (wt%)	미상	EPMA, 방사능측정	Microprobe analyses of karnasurtite and Thorite from the pegmatite (wt%)	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
495	CJ-1~56	Microprobe analyses of apatite from the alkali granite (wt%)	미상	EPMA, 방사능측정	Microprobe analyses of apatite from the alkali granite (wt%)	충주 어래산 일대에서 산출하는 희토류 광물의 광물학적 및 광물화학적 특성 (자원환경지질 Econ_v45n6p643)	36.961389 127.785000; 36.961389 127.821389; 36.924167 127.821389; 36.924167 127.785000
496	OG-1/3/8/2/7/9/17/1-1	General geological map of the Ogcheon deposit, showing the orientation of the principal quartz veins(modified from Lee et al., 2001).	미상	현미경조사, 안정동위원소 분석	General geological map of the Ogcheon deposit, showing the orientation of the principal quartz veins(modified from Lee et al., 2001).	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
497	OG-1/3/8/2/7/9/17/1-1	Plan section of the Ogcheon deposit(main adit), showing the orientation and location of the principal quartz veins and sampling locations	미상	현미경조사, 안정동위원소 분석	Plan section of the Ogcheon deposit(main adit), showing the orientation and location of the principal quartz veins and sampling locations	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944
498	OG-1/3/8/2/7/9/17/1-1	Photomicrographs of ore minerals from Ogcheon deposit. (A) Pyrite coexisting with arsenopyrite and chalcopyrite and galena fill along microfractures of pyrite. (B) Pyrite partially replaced by goethite, (C) Sphalerite coexisting with pyrite and chalcopyrite. (D) Arsenopyrite coexisting with pyrrhotite and chalcopyrite and chalcopyrite partially replaces pyrrhotite. (E) and (F) Pyrrhotite coexisting with pyrite and chalcopyrite and chalcopyrite partially replaces pyrrhotite. Abbreviations: Asp=arsenopyrite, Cp=chalcopyrite, Gn=galena, Go=goethite, Po=pyrrhotite, Py=pyrite, Qtz=quartz, Sp=sphalerite.	미상	현미경조사, 안정동위원소 분석	Photomicrographs of ore minerals from Ogcheon deposit. (A) Pyrite coexisting with arsenopyrite and chalcopyrite and galena fill along microfractures of pyrite. (B) Pyrite partially replaced by goethite, (C) Sphalerite coexisting with pyrite and chalcopyrite. (D) Arsenopyrite coexisting with pyrrhotite and chalcopyrite and chalcopyrite partially replaces pyrrhotite. (E) and (F) Pyrrhotite coexisting with pyrite and chalcopyrite and chalcopyrite partially replaces pyrrhotite. Abbreviations: Asp=arsenopyrite, Cp=chalcopyrite, Gn=galena, Go=goethite, Po=pyrrhotite, Py=pyrite, Qtz=quartz, Sp=sphalerite.	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944
499	OG-1/3/8/2/7/9/17/1-1	Photomicrographs of representative fluid inclusion types in quartz from the Ogcheon deposit. (A), (B), (C) and (D) liquid-rich type inclusions in white and transparent quartz.	미상	현미경조사, 안정동위원소 분석	Photomicrographs of representative fluid inclusion types in quartz from the Ogcheon deposit. (A), (B), (C) and (D) liquid-rich type inclusions in white and transparent quartz.	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944
500	OG-1/3/8/2/7/9/17/1-1	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the Ogcheon deposit.	미상	현미경조사, 안정동위원소 분석	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the Ogcheon deposit.	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944
501	OG-1/3/8/2/7/9/17/1-1	Sulfur, oxygen and hydrogen isotopic data of minerals from the Ogcheon deposit	미상	현미경조사, 안정동위원소 분석	Sulfur, oxygen and hydrogen isotopic data of minerals from the Ogcheon deposit	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944
502	OG-1/3/8/2/7/9/17/1-1	Characteristics of the Ogcheon and some deposits in study area	미상	현미경조사, 안정동위원소 분석	Characteristics of the Ogcheon and some deposits in study area	옥천 금-은광상의 생성환경: 광석광물, 유체포유물 및 안정동위원소 연구 (자원환경지질 Econ_v46n2p153)	36.296667 127.721944; 36.296667 127.726667; 36.295556 127.726667; 36.295556 127.721944
503	G6-11-1~3, G6-7-2, G6-6-1~2	Geologic map of the Geumhwa deposit area (after Kim et al., 1981). Simplified geologic map of Korea shows the location of the Geumhwa deposit.	미상	현미경조사	Geologic map of the Geumhwa deposit area (after Kim et al., 1981). Simplified geologic map of Korea shows the location of the Geumhwa deposit.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
504	G6-11-1~3, G6-7-2, G6-6-1~2	Vein mineral paragenesis of the Geumhwa Au-Ag deposit.	미상	현미경조사	Vein mineral paragenesis of the Geumhwa Au-Ag deposit.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
505	G6-11-1~3, G6-7-2, G6-6-1~2	Photomicrographs of mineral occurrence and assemblages at the Geumhwa deposit. Irregular electrum grain in pyrite (A and B) or within chalcopyrite (C). Subhedral tetrahedrite (and/or) tennantite in pyrite (A and B). Subhedral wolframite in early pyrite grain (D). Abbreviations: cp=chalcopyrite, el=electrum, mt=magnetite, py=pyrite, sl=sphalerite, tn=tennantite, tt=tetrahedrite, wf=wolframite.	미상	현미경조사	Photomicrographs of mineral occurrence and assemblages at the Geumhwa deposit. Irregular electrum grain in pyrite (A and B) or within chalcopyrite (C). Subhedral tetrahedrite (and/or) tennantite in pyrite (A and B). Subhedral wolframite in early pyrite grain (D). Abbreviations: cp=chalcopyrite, el=electrum, mt=magnetite, py=pyrite, sl=sphalerite, tn=tennantite, tt=tetrahedrite, wf=wolframite.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
506	G6-11-1~3, G6-7-2, G6-6-1~2	Photomicrographs of type I (A, C, D), II (B) and III (E, F, G, H) fluid inclusions in vein quartz, Geumhwa deposit	미상	현미경조사	Photomicrographs of type I (A, C, D), II (B) and III (E, F, G, H) fluid inclusions in vein quartz, Geumhwa deposit	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
507	G6-11-1~3, G6-7-2, G6-6-1~2	Histogram of homogenization temperatures(Th) of fluid inclusions in vein quartz of the Geumhwa deposit.	미상	현미경조사	Histogram of homogenization temperatures(Th) of fluid inclusions in vein quartz of the Geumhwa deposit.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
508	G6-11-1~3, G6-7-2, G6-6-1~2	Histogram of salinities of fluid inclusions in vein quartz of the Geumhwa deposit.	미상	현미경조사	Histogram of salinities of fluid inclusions in vein quartz of the Geumhwa deposit.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
509	G6-11-1~3, G6-7-2, G6-6-1~2	Homogenization temperature versus salinity diagram for type I and III fluid inclusions in vein quartz of the Geumhwa deposit.	미상	현미경조사	Homogenization temperature versus salinity diagram for type I and III fluid inclusions in vein quartz of the Geumhwa deposit.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
510	G6-11-1~3, G6-7-2, G6-6-1~2	Sulfur fugacity versus temperature diagram for stage I of Geumhwa Au-Ag deposit with sulfidation reactions. Abbreviations: As=arsenic, Asp=arsenopyrite, Cp=chalcopyrite, Hm=hematite, Mt=magnetite, NAg=atomic fraction of Ag in electrum, Py=pyrite, Po=pyrrhotite, Thd=tetrahedrite.	미상	현미경조사	Sulfur fugacity versus temperature diagram for stage I of Geumhwa Au-Ag deposit with sulfidation reactions. Abbreviations: As=arsenic, Asp=arsenopyrite, Cp=chalcopyrite, Hm=hematite, Mt=magnetite, NAg=atomic fraction of Ag in electrum, Py=pyrite, Po=pyrrhotite, Thd=tetrahedrite.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
511	G6-11-1~3, G6-7-2, G6-6-1~2	Log fo2-fs2 diagram calculated at 250°C showing stability relationship of the late main Au-Ag mineralization temperature at Geumhwa deposit. The ranges in fs2 were calculated from the FeS contents in sphalerite (Scott and Barnes, 1971) and mineral assemblages.	미상	현미경조사	Log fo2-fs2 diagram calculated at 250°C showing stability relationship of the late main Au-Ag mineralization temperature at Geumhwa deposit. The ranges in fs2 were calculated from the FeS contents in sphalerite (Scott and Barnes, 1971) and mineral assemblages.	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
512	G6-11-1~3, G6-7-2, G6-6-1~2	Chemical composition of electrum from Geumhwa deposit	미상	현미경조사	Chemical composition of electrum from Geumhwa deposit	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
513	G6-11-1~3, G6-7-2, G6-6-1~2	Chemical composition of sphalerite from Geumhwa deposit	미상	현미경조사	Chemical composition of sphalerite from Geumhwa deposit	함 금-은 금화 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n1p049)	36.052445 128.566663
514	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Geological map of the Dongwon deposit (from KIGAM, 1962a, b, c and d) with simplified geologic map of Korea showing the tectonic province and location of the Dongwon deposit.	미상	현미경조사	Geological map of the Dongwon deposit (from KIGAM, 1962a, b, c and d) with simplified geologic map of Korea showing the tectonic province and location of the Dongwon deposit.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
515	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Mineral paragenesis of the Dongwon Au-Ag deposit.	미상	현미경조사	Mineral paragenesis of the Dongwon Au-Ag deposit.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
516	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Photomicrographs of mineral occurrence and assemblages at the Dongwon deposit. Abbreviations: ag=argentite, asp=arsenopyrite, cp=chalcopyrite, el=electrum, gn=galena, py=pyrite, pyr=pyrrhotite, qtz=quartz, sl=sphalerite, tt=tetrahedrite.	미상	현미경조사	Photomicrographs of mineral occurrence and assemblages at the Dongwon deposit. Abbreviations: ag=argentite, asp=arsenopyrite, cp=chalcopyrite, el=electrum, gn=galena, py=pyrite, pyr=pyrrhotite, qtz=quartz, sl=sphalerite, tt=tetrahedrite.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
517	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Photomicrographs of type I (A, B and D) and type II (C and D) fluid inclusions in vein quartz, Dongwon deposit. Abbreviations: V=vapor phase, L=liquid phase, type I=type I fluid inclusion, type II=type II fluid inclusion.	미상	현미경조사	Photomicrographs of type I (A, B and D) and type II (C and D) fluid inclusions in vein quartz, Dongwon deposit. Abbreviations: V=vapor phase, L=liquid phase, type I=type I fluid inclusion, type II=type II fluid inclusion.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
518	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Histogram of homogenization temperatures(Th) of fluid inclusions in vein quartz of the Dongwon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion.	미상	현미경조사	Histogram of homogenization temperatures(Th) of fluid inclusions in vein quartz of the Dongwon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
519	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Histogram of salinities of fluid inclusions in vein quartz of the Dongwon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion.	미상	현미경조사	Histogram of salinities of fluid inclusions in vein quartz of the Dongwon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
520	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Homogenization temperature versus salinity diagram for type I and II fluid inclusions in vein quartz of the Dongwon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion.	미상	현미경조사	Homogenization temperature versus salinity diagram for type I and II fluid inclusions in vein quartz of the Dongwon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
521	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Pseudo-binary condensed T-XAs section of the Fe-As-S system (Kretschmar and Scott, 1976). Filled triangles and inverted triangles indicate As contents in arsenopyrite, Dongwon deposit. Filled triangles (with pyrrhotite and pyrite) and inverted triangles (with pyrite and sphalerite) indicate As contents of arsenopyrite, Dongwon Au-Ag deposit. Abbreviations: Ap=arsenopyrite, Lo=loellingite, Py=pyrite, Po=pyrrhotite.	미상	현미경조사	Pseudo-binary condensed T-XAs section of the Fe-As-S system (Kretschmar and Scott, 1976). Filled triangles and inverted triangles indicate As contents in arsenopyrite, Dongwon deposit. Filled triangles (with pyrrhotite and pyrite) and inverted triangles (with pyrite and sphalerite) indicate As contents of arsenopyrite, Dongwon Au-Ag deposit. Abbreviations: Ap=arsenopyrite, Lo=loellingite, Py=pyrite, Po=pyrrhotite.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886

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522	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Fugacity of Sulfur versus temperature diagram for stage I of Dongwon Au-Ag deposit showing the possible sulfur fugacity and temperature ranges with sulfidation reactions. Abbreviations: Arg=argentite, Asp=arsenopyrite, Hm=hematite, Mt=magnetite, NAg=atomic fraction Ag in electrum, Po=pyrrhotite, Py=pyrite.	미상	현미경조사	Fugacity of Sulfur versus temperature diagram for stage I of Dongwon Au-Ag deposit showing the possible sulfur fugacity and temperature ranges with sulfidation reactions. Abbreviations: Arg=argentite, Asp=arsenopyrite, Hm=hematite, Mt=magnetite, NAg=atomic fraction Ag in electrum, Po=pyrrhotite, Py=pyrite.	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
523	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Chemical composition of arsenopyrite from Dongwon deposit	미상	현미경조사	Chemical composition of arsenopyrite from Dongwon deposit	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
524	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Chemical composition of sphalerite from Dongwon deposit	미상	현미경조사	Chemical composition of sphalerite from Dongwon deposit	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
525	c2-1-2-1, c2-1-3-1, c2-1-3-3, c2-1-6-1, c2-1-7, c2-1-8	Chemical composition of electrum from Dongwon deposit	미상	현미경조사	Chemical composition of electrum from Dongwon deposit	동원 함 금-은 열수 맥상광상의 생성환경 (자원환경지질 Econ_v54n6p753)	37.321364 128.805886
526	GSD-151-6-1~271-1-2	Geologic map of the Gasado deposit area (left side; modified from Kim, 2016) with simplified geologic map of Korea showing the location of the Gasado Au-Ag deposit (right side). Beach 1, 2 and 3 represent the location of Beach No. 1, Beach No. 2 and Beach No. 3 vein, respectively.	미상	EMPA	Geologic map of the Gasado deposit area (left side; modified from Kim, 2016) with simplified geologic map of Korea showing the location of the Gasado Au-Ag deposit (right side). Beach 1, 2 and 3 represent the location of Beach No. 1, Beach No. 2 and Beach No. 3 vein,	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014
527	GSD-151-6-1~271-1-2	Photographs of the products of hydrothermal mineralization at the Gasado Au-Ag deposit. Scale bar represents 1cm. A: colloform and chalcidony texture, B: chalcidony texture, C: drusy texture. Abbreviations: py=pyrite, py+sl+gn=pyrite+sphalerite+galena, qtz=quartz.	미상	EMPA	Photographs of the products of hydrothermal mineralization at the Gasado Au-Ag deposit. Scale bar represents 1cm. A: colloform and chalcidony texture, B: chalcidony texture, C: drusy texture. Abbreviations: py=pyrite, py+sl+gn=pyrite+sphalerite+galena,	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014
528	GSD-151-6-1~271-1-2	Vein mineral paragenesis of the Gasado Au-Ag deposit.	미상	EMPA	Vein mineral paragenesis of the Gasado Au-Ag deposit.	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014
529	GSD-151-6-1~271-1-2	Photomicrographs of mineral occurrence and assemblages at the Gasado Au-Ag deposit. For descriptions of each photograph, refer to the text. Scale bar represents 20µm. Abbreviations: Arg=argentite, Cp=chalcopyrite, El=electrum, Native Ag=native silver, Po=pyrrhotite, Py=pyrite, Sl=sphalerite, Uy=Uytenbogaardtite.	미상	EMPA	Photomicrographs of mineral occurrence and assemblages at the Gasado Au-Ag deposit. For descriptions of each photograph, refer to the text. Scale bar represents 20µm. Abbreviations: Arg=argentite, Cp=chalcopyrite, El=electrum, Native Ag=native silver, Po=pyrrhotite, Py=pyrite, Sl=sphalerite, Uy=Uytenbogaardtite.	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014

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530	GSD-151-6-1~271-1-2	Sulfur fugacity versus temperature diagram for Au-Ag mineralization of stage I at the Gasado Au-Ag deposit with sulfidation reactions. Abbreviations: Ag=native silver, arg=argentite, py=pyrite, po=pyrrhotite.	미상	EMPA	Sulfur fugacity versus temperature diagram for Au-Ag mineralization of stage I at the Gasado Au-Ag deposit with sulfidation reactions. Abbreviations: Ag=native silver, arg=argentite, py=pyrite, po=pyrrhotite.	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014
531	GSD-151-6-1~271-1-2	Representative chemical composition of electrum from the Gasado Au-Ag deposit	미상	EMPA	Representative chemical composition of electrum from the Gasado Au-Ag deposit	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014
532	GSD-151-6-1~271-1-2	Representative chemical composition of sphalerite from the Gasado Au-Ag deposit	미상	EMPA	Representative chemical composition of sphalerite from the Gasado Au-Ag deposit	함 금-은 가사도 열수 맥상광상의 성인 (자원환경지질 Econ_v55n1p053)	34.475322 126.031014; 34.475322 126.057500; 34.453564 126.057500; 34.453564 126.031014
533	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Electron microprobe analysis of plagioclase from the gabbroic pegmatite and pyroxene-apatite-zircon rock	미상	ICP-OES, ICP-MS, EPMA	Electron microprobe analysis of plagioclase from the gabbroic pegmatite and pyroxene-apatite-zircon rock	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
534	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Electron microprobe analysis of amphibole from the gabbroic pegmatite and pyroxene-apatite-zircon rock	미상	ICP-OES, ICP-MS, EPMA	Electron microprobe analysis of amphibole from the gabbroic pegmatite and pyroxene-apatite-zircon rock	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
535	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Electron microprobe analysis of pyroxene from the gabbroic pegmatite and pyroxene-apatite-zircon rock	미상	ICP-OES, ICP-MS, EPMA	Electron microprobe analysis of pyroxene from the gabbroic pegmatite and pyroxene-apatite-zircon rock	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
536	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Electron microprobe analysis of olivine from the gabbroic pegmatite	미상	ICP-OES, ICP-MS, EPMA	Electron microprobe analysis of olivine from the gabbroic pegmatite	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
537	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Electron microprobe analysis of Fe-Ti oxide minerals from the gabbroic pegmatite	미상	ICP-OES, ICP-MS, EPMA	Electron microprobe analysis of Fe-Ti oxide minerals from the gabbroic pegmatite	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
538	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	a) Simplified tectonostratigraphic map of the southern Korean Peninsula showing the location of the Gonamsan intrusion. b) Geological map of the Gonamsan area showing the gabbroic rocks and attendant Fe-Ti (-V) oxide deposit (after Cho and Bang, 1980). c) Distribution of the major Fe-Ti (-V) oxide mineralization and gabbroic pegmatite in the central-eastern region of the Gonamsan intrusion. d) Simplified log of the drill core (No. BH20-3, BH21-2). Abbreviations: Apt= apatite, GB= Gyeongsan Basin, GM= Gyeonggi Massif, IB= Imjingang Belt, OB= Okcheon Metamorphic Belt, PB= Pyeongnam Basin, Pyx= pyroxene, TB= Taebaeksan Basin, YM= Yeongnam Massif, and Zrn= zircon.	미상	ICP-OES, ICP-MS, EPMA	a) Simplified tectonostratigraphic map of the southern Korean Peninsula showing the location of the Gonamsan intrusion. b) Geological map of the Gonamsan area showing the gabbroic rocks and attendant Fe-Ti (-V) oxide deposit (after Cho and Bang, 1980). c) Distribution of the major Fe-Ti (-V) oxide mineralization and gabbroic pegmatite in the central-eastern region of the Gonamsan intrusion. d) Simplified log of the drill core (No. BH20-3, BH21-2). Abbreviations: Apt= apatite, GB= Gyeongsan Basin, GM= Gyeonggi Massif, IB= Imjingang Belt, OB= Okcheon Metamorphic Belt, PB= Pyeongnam Basin, Pyx= pyroxene, TB= Taebaeksan Basin, YM= Yeongnam	포천지역 고남산 반력암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
539	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Photos of the plagioclase-amphibole pegmatite from the Upper Adit. a) Plagioclase-amphibole pegmatite showing intergranular texture, in which the open space formed by large plagioclase laths are infilled by amphibole. b) Two-sized plagioclase grains consisting of coarser primary plagioclase and inferred recrystallized fine-grained plagioclase. c) The association of amphibole with ilmenite and sphene. Note that the edenite core is rimmed by pargasite. d) Reflectance light of the Fig. 3c. e) Ameboidal-like ilmenite within pyroxene grain, in which ilmenite is parallel to the outline of host clinopyroxene but is perpendicularly distributed inward grain core. Abbreviations: Am= amphibole, An= anorthite, Chl= chlorite, Cpx= clinopyroxene, Cpy= chalcopyrite, Ed= edenite, Ep= epidote, Ilm= ilmenite, Pl= Plagioclase, Prg= pargasite, Ser= sericite, and Spn= sphene.	미상	ICP-OES, ICP-MS, EPMA	Photos of the plagioclase-amphibole pegmatite from the Upper Adit. a) Plagioclase-amphibole pegmatite showing intergranular texture, in which the open space formed by large plagioclase laths are infilled by amphibole. b) Two-sized plagioclase grains consisting of coarser primary plagioclase and inferred recrystallized fine-grained plagioclase. c) The association of amphibole with ilmenite and sphene. Note that the edenite core is rimmed by pargasite. d) Reflectance light of the Fig. 3c. e) Ameboidal-like ilmenite within pyroxene grain, in which ilmenite is parallel to the outline of host clinopyroxene but is perpendicularly distributed inward grain core. Abbreviations: Am= amphibole, An= anorthite, Chl= chlorite, Cpx= clinopyroxene, Cpy= chalcopyrite, Ed= edenite, Ep= epidote, Ilm= ilmenite, Pl= Plagioclase, Prg= pargasite, Ser= sericite, and Spn= sphene.	포천지역 고남산 반력암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836

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540	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Photos of the pyroxene–olivine pegmatite in the Upper Adit. a) Handspecimen of pyroxene–olivine pegmatite. b) Poikilitic texture defined by smaller euhedral olivine (minor spinel) enclosed by coarser clinopyroxene. c) Close–up view of clinopyroxene oikocryst containing exsolved ilmenite. d–f) Intensely fractured olivine, filled by Fe–Ti oxide minerals and serpentine, which truncated and encompassed early formed interstitial magnetite and ilmenite. g) Ilmenite and spinel exsolution in host magnetite. h) Granular spinel containing magnetite and ilmenite. Abbreviations: Apt= apatite, Cc= calcite, Fo= forsterite, Spl= spinel, Srp–Mag= Serpentinized magnetite, and others same as in Figs. 2 and 3.	미상	ICP-OES, ICP-MS, EPMA	Photos of the pyroxene–olivine pegmatite in the Upper Adit. a) Handspecimen of pyroxene–olivine pegmatite. b) Poikilitic texture defined by smaller euhedral olivine (minor spinel) enclosed by coarser clinopyroxene. c) Close–up view of clinopyroxene oikocryst containing exsolved ilmenite. d–f) Intensely fractured olivine, filled by Fe–Ti oxide minerals and serpentine, which truncated and encompassed early formed interstitial magnetite and ilmenite. g) Ilmenite and spinel exsolution in host magnetite. h) Granular spinel containing magnetite and ilmenite. Abbreviations: Apt= apatite, Cc= calcite, Fo= forsterite, Spl=	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
541	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Photos of the gabbroic pegmatite intersected by drill core (No. BH20–3). a) Plagioclase– and pyroxene dominant pegmatite. b) Magnetite and ilmenite occurring interstitially in the plagioclase dominant pegmatite. c) Ilmenite and spinel exsolution in host magnetite. Reflectance light. d, e) Pyroxene dominant gabbroic pegmatite and associated interstitial Fe–Ti oxide minerals. Abbreviations: Py= pyrite, Qtz= quartz, and others same as in Figs. 1–3.	미상	ICP-OES, ICP-MS, EPMA	Photos of the gabbroic pegmatite intersected by drill core (No. BH20–3). a) Plagioclase– and pyroxene dominant pegmatite. b) Magnetite and ilmenite occurring interstitially in the plagioclase dominant pegmatite. c) Ilmenite and spinel exsolution in host magnetite. Reflectance light. d, e) Pyroxene dominant gabbroic pegmatite and associated interstitial Fe–Ti oxide minerals. Abbreviations: Py= pyrite, Qtz= quartz, and others same as in Figs. 1–3.	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
542	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	a–c) Photos of drill core and handspecimen of pyroxene–apatite–zircon–rich rocks. d, e) Photomicrographs of apatite–rich layer (d) and zircon–rich zone (e). Abbreviations: Ab= albite, Aug= augite, and others same as in Figs. 1–3.	미상	ICP-OES, ICP-MS, EPMA	a–c) Photos of drill core and handspecimen of pyroxene–apatite–zircon–rich rocks. d, e) Photomicrographs of apatite–rich layer (d) and zircon–rich zone (e). Abbreviations: Ab= albite, Aug= augite,	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
543	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	a) Primitive mantle normalized multi element diagram of gabbroic pegmatite and pyroxene–zircon–apatite rock. b) Chondritenormalized REE pattern of gabbroic pegmatite and pyroxene–apatite–zircon rock. The values for primitive mantle and chondrite are from Sun and McDonough (1989).	미상	ICP-OES, ICP-MS, EPMA	a) Primitive mantle normalized multi element diagram of gabbroic pegmatite and pyroxene–zircon–apatite rock. b) Chondritenormalized REE pattern of gabbroic pegmatite and pyroxene–apatite–zircon rock. The values for primitive mantle and chondrite are from Sun and McDonough (1989).	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836
544	GBSUA3A2, BH20-3-7, BH20-3-3, GNSUA3B, BH20-3-5	Whole–rock composition of the gabbroic pegmatite and pyroxene–apatite–zircon rock from the Gonamsan intrusion	미상	ICP-OES, ICP-MS, EPMA	Whole–rock composition of the gabbroic pegmatite and pyroxene–apatite–zircon rock from the Gonamsan intrusion	포천지역 고남산 반려암질암 내 발생하는 후기 화성활동에 관한 예비 연구 (자원환경지질 Econ_v55n1p077)	38.123353 127.219836; 38.123353 127.235725; 38.112369 127.235725; 38.112369 127.219836

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
545	GC-34-4-1~35-5-5	Geological map of the Geochang deposit area (left side; modified from Cheong et al., 2018) with simplified geologic map of Korea showing the location of the Geochang Au-Ag deposit (right side).	미상	EPMA	Geological map of the Geochang deposit area (left side; modified from Cheong et al., 2018) with simplified geologic map of Korea showing the location of the Geochang Au-Ag deposit	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
546	GC-34-4-1~35-5-5	Mineral paragenesis of the Geochang Au-Ag deposit.	미상	EPMA	Mineral paragenesis of the Geochang Au-Ag deposit.	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
547	GC-34-4-1~35-5-5	Photomicrographs of mineral occurrence and assemblages at the Geochang Au-Ag deposit. Abbreviations: apob=arsenopolybasite, asp=arsenopyrite, cp=chalcopyrite, el=electrum, gn=galena, pob=polybasite, py=pyrite, pyr=pyrrhotite, qtz=quartz, sl=sphalerite, ht=hematite.	미상	EPMA	Photomicrographs of mineral occurrence and assemblages at the Geochang Au-Ag deposit. Abbreviations: apob=arsenopolybasite, asp=arsenopyrite, cp=chalcopyrite, el=electrum, gn=galena, pob=polybasite, py=pyrite, pyr=pyrrhotite, qtz=quartz, sl=sphalerite, ht=hematite.	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
548	GC-34-4-1~35-5-5	Histogram of homogenization temperatures (Th) of fluid inclusions in vein quartz of the Geochang Au-Ag deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion, Type IV=type IV fluid inclusion.	미상	EPMA	Histogram of homogenization temperatures (Th) of fluid inclusions in vein quartz of the Geochang Au-Ag deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II fluid inclusion, Type IV=type IV fluid inclusion.	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
549	GC-34-4-1~35-5-5	Histogram of salinities of fluid inclusions in vein quartz of the Geochang Au-Ag deposit. Abbreviations: Type I=type I fluid inclusion, Type IV=type IV fluid inclusion.	미상	EPMA	Histogram of salinities of fluid inclusions in vein quartz of the Geochang Au-Ag deposit. Abbreviations: Type I=type I fluid inclusion, Type IV=type IV fluid inclusion.	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
550	GC-34-4-1~35-5-5	Homogenization temperature (Th) versus salinity diagram for type I and IV fluid inclusions in vein quartz of the Geochang Au-Ag deposit. Abbreviations: Type I=type I fluid inclusion, Type IV=type IV fluid inclusion.	미상	EPMA	Homogenization temperature (Th) versus salinity diagram for type I and IV fluid inclusions in vein quartz of the Geochang Au-Ag deposit. Abbreviations: Type I=type I fluid inclusion, Type IV=type IV fluid inclusion.	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
551	GC-34-4-1~35-5-5	Fugacity of Sulfur versus temperature diagram for stage I of the Geochang Au-Ag deposit showing the possible sulfur fugacity and temperature ranges with sulfidation reactions. Abbreviations: Arg=argentite, Asp=arsenopyrite, Hm=hematite, Mt=magnetite, NAg=atomic fraction Ag in electrum, Po=pyrrhotite, Py=pyrite.	미상	EPMA	Fugacity of Sulfur versus temperature diagram for stage I of the Geochang Au-Ag deposit showing the possible sulfur fugacity and temperature ranges with sulfidation reactions. Abbreviations: Arg=argentite, Asp=arsenopyrite, Hm=hematite, Mt=magnetite, NAg=atomic fraction Ag in electrum, Po=pyrrhotite, Py=pyrite.	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
552	GC-34-4-1~35-5-5	Chemical composition of arsenopyrite from the Geochang Au-Ag deposit	미상	EPMA	Chemical composition of arsenopyrite from the Geochang Au-Ag deposit	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
553	GC-34-4-1~35-5-5	Representative chemical composition of electrum from the Geochang Au-Ag deposit	미상	EPMA	Representative chemical composition of electrum from the Geochang Au-Ag deposit	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762
554	GC-34-4-1~35-5-5	Representative chemical composition of sphalerite from the Geochang Au-Ag deposit	미상	EPMA	Representative chemical composition of sphalerite from the Geochang Au-Ag deposit	거창 열수 맥수광상의 함 금-은 광화작용 (자원환경지질 Econ_v55n2p171)	35.652794 127.972762

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
555	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	A geology map of the Goseong area, showing the sampling site of Duibaejae basalts. Obongri volcanic edifice group consists of Duibaejae, Galmibong, 102 m height, 166 m height, Oeumsan, and 249 m height volcanic edifice.	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	A geology map of the Goseong area, showing the sampling site of Duibaejae basalts. Obongri volcanic edifice group consists of Duibaejae, Galmibong, 102 m height, 166 m height, Oeumsan, and 249 m height volcanic edifice.	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
556	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Photomicrographs of (a) olivine in lower basalt showing the reaction rim, (b) iddingsite in lower basalt, (c) quartz xenocryst in lower basalt, and (d) mantle xenolith of upper basalt from the Duibaejae volcanic edifice. Ol=olivine, S=spinel, Q=quartz.	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Photomicrographs of (a) olivine in lower basalt showing the reaction rim, (b) iddingsite in lower basalt, (c) quartz xenocryst in lower basalt, and (d) mantle xenolith of upper basalt from the Duibaejae volcanic edifice. Ol=olivine, S=spinel, Q=quartz.	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
557	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Haker variation diagram of major oxide (wt%) vs. MgO of Duibaejae basalts. ■: Duibaejae upper basalt, □: Duibaejae lower basalt.	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Haker variation diagram of major oxide (wt%) vs. MgO of Duibaejae basalts. ■: Duibaejae upper basalt, □: Duibaejae lower basalt.	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
558	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	(a) Primitive mantle-normalized spider diagram of Duibaejae basalts (Taylor and McLennan, 1985). (b) Primitive mantlenormalized rare earth element patterns of Duibaejae basalts (Sun and McDonough, 1989).	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	(a) Primitive mantle-normalized spider diagram of Duibaejae basalts (Taylor and McLennan, 1985). (b) Primitive mantlenormalized rare earth element patterns of Duibaejae basalts (Sun and McDonough, 1989).	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
559	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	(a) K2O vs. Na2O (wt%) and (b) P2O5 vs. K2O (wt%) diagrams. Symbols are the same as those in Fig. 4.	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	(a) K2O vs. Na2O (wt%) and (b) P2O5 vs. K2O (wt%) diagrams. Symbols are the same as those in Fig. 4.	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
560	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	(a) La vs. Ba (ppm), (b) Tb vs. Y (ppm), (c) La vs. Rb (ppm), and (d) La/Nb vs. Ba/Nb (ppm) diagram of Duibaejae basalts. Symbols are the same as those in Fig. 4.	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	(a) La vs. Ba (ppm), (b) Tb vs. Y (ppm), (c) La vs. Rb (ppm), and (d) La/Nb vs. Ba/Nb (ppm) diagram of Duibaejae basalts. Symbols are the same as those	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
561	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	La vs. La/Sm diagram of Duibaejae basalts. Symbols are the same as those in Fig. 4. Calculation of degree of partial melting of a garnet peridotite with 60% olivine, 20% orthopyroxene, 10% clinopyroxene and 10% garnet. Equilibrium modal partial melting equation by Shaw (1979) has been used for the calculation.	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	La vs. La/Sm diagram of Duibaejae basalts. Symbols are the same as those in Fig. 4. Calculation of degree of partial melting of a garnet peridotite with 60% olivine, 20% orthopyroxene, 10% clinopyroxene and 10% garnet. Equilibrium modal partial melting equation by Shaw (1979) has been used for the calculation.	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
562	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Feature of Duibaejae basalts	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Feature of Duibaejae basalts	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
563	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Major element analyses (wt%) of Duibaejae basalts	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Major element analyses (wt%) of Duibaejae basalts	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
564	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Trace element analyses (ppm) of Duibaejae basalts	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Trace element analyses (ppm) of Duibaejae basalts	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
565	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Rare earth element analyses (ppm) of Duibaejae basalts. Eu* is an expected concentration obtained by interpolating between the normalized values of Sm and Gd	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Rare earth element analyses (ppm) of Duibaejae basalts. Eu* is an expected concentration obtained by interpolating between the normalized values of Sm and Gd	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
566	DL1-1/2, DL2-1/2, DL3-1/2, DL4-1/2, DL5-1/2, DL6-1/2, DL7-1/2, DU1-1/2	Calculation of degree of partial melting of a garnet peridotite with 60% olivine, 20% orthopyroxene, 10% clinopyroxene and 10% garnet. The equilibrium modal partial melting equation is as given by Shaw (1979): $Cl/Co=1/(F+D(1-F))$, where F; the degree of partial melting, D; the bulk distribution coefficient for the starting source assemblage, Cl; elemental abundance in the evolved liquid, Co: elemental abundance in the source	미상	현미경조사, 구성성분 분석, XRF, ICP-MS, ICP-AES	Calculation of degree of partial melting of a garnet peridotite with 60% olivine, 20% orthopyroxene, 10% clinopyroxene and 10% garnet. The equilibrium modal partial melting equation is as given by Shaw (1979): $Cl/Co=1/(F+D(1-F))$, where F; the degree of partial melting, D; the bulk distribution coefficient for the starting source assemblage, Cl; elemental abundance in the evolved liquid, Co: elemental abundance in the	강원도 고성 뒤편재 화산암의 암석화학적 특성 (지구과학회지 Earth_v34n2p109)	38.351111 128.475833; 38.351111 128.528056; 38.325000 128.528056; 38.325000 128.475833
567	KG1A~F, KG2/3	The simplified geologic map showing the locations of sampling sites.	미상	시료채취, ICP-AES	The simplified geologic map showing the locations of sampling sites.	전남 구례지역의 백악기층에 나타나는 화산암에 대한 K-Ar 연대 (지구과학회지 Earth_v36n1p027)	35.206667 127.440000; 35.206667 127.559722; 35.103333 127.559722; 35.103333 127.440000
568	KG1A~F, KG2/3	(a) Andesite (KG1A), (b) Microphotographs of andesite (cross nicol, ×50), (c) Dacite (KG1B), (d) Microphotographs of andesite (cross nicol, ×50), (e) Rhyolite (KG1F), (f) Microphotographs of andesite (cross nicol, ×50), (g) Andesite (KG2), (h) Microphotographs of andesite (cross nicol, ×50).	미상	시료채취, ICP-AES	(a) Andesite (KG1A), (b) Microphotographs of andesite (cross nicol, ×50), (c) Dacite (KG1B), (d) Microphotographs of andesite (cross nicol, ×50), (e) Rhyolite (KG1F), (f) Microphotographs of andesite (cross nicol, ×50), (g) Andesite (KG2), (h) Microphotographs of andesite (cross nicol, ×50).	전남 구례지역의 백악기층에 나타나는 화산암에 대한 K-Ar 연대 (지구과학회지 Earth_v36n1p027)	35.206667 127.440000; 35.206667 127.559722; 35.103333 127.559722; 35.103333 127.440000
569	KG1A~F, KG2/3	K-Ar ages for the volcanic rocks in Cretaceous strata of Gurye area	미상	시료채취, ICP-AES	K-Ar ages for the volcanic rocks in Cretaceous strata of Gurye area	전남 구례지역의 백악기층에 나타나는 화산암에 대한 K-Ar 연대 (지구과학회지 Earth_v36n1p027)	35.206667 127.440000; 35.206667 127.559722; 35.103333 127.559722; 35.103333 127.440000
570	site 1~6	Geology of study area (modified Son, 2016).	미상	X선 형광분석기	Geology of study area (modified Son, 2016).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
571	site 1~6	Microphotographs of rhyolitic welded tuff (a,b: site ①, c,d: site ③, e,f: site ⑤; Son, 2016).	미상	X선 형광분석기	Microphotographs of rhyolitic welded tuff (a,b: site ①, c,d: site ③, e,f: site ⑤; Son, 2016).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
572	site 1~6	Schematic drawing of the different geological contexts and geometries of columnar joint (Hetenyi et al., 2012; modified of Ahn, 2014b). (a) thin lava flow (<10 m), (b) high viscosity lava flow, (c) lava lake, (d) lava dome, (e) dyke or sill	미상	X선 형광분석기	Schematic drawing of the different geological contexts and geometries of columnar joint (Hetenyi et al., 2012; modified of Ahn, 2014b). (a) thin lava flow (<10 m), (b) high viscosity lava flow, (c) lava lake, (d) lava dome, (e)	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
573	site 1~6	Location of columnar joints in study area.	미상	X선 형광분석기	Location of columnar joints in study area.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
574	site 1~6	Distribution and expected area of columnar joint in site ①.	미상	X선 형광분석기	Distribution and expected area of columnar joint in site ①.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
575	site 1~6	Location of columnar joints in site ②.	미상	X선 형광분석기	Location of columnar joints in site ②.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
576	site 1~6	Location of columnar joints in site ③.	미상	X선 형광분석기	Location of columnar joints in site ③.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
577	site 1~6	Location of columnar joints in site ④.	미상	X선 형광분석기	Location of columnar joints in site ④.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
578	site 1~6	Total alkali vs. SiO ₂ (wt.%) diagram (TAS) with analyses of rocks in study area (●: Area 1, ○: Area 2, ▲: Area 3).	미상	X선 형광분석기	Total alkali vs. SiO ₂ (wt.%) diagram (TAS) with analyses of rocks in study area (●: Area 1, ○: Area 2, ▲: Area 3).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
579	site 1~6	AFM diagram for study area (Irvine and Baragar, 1971). Symbols are shown in Fig. 15.	미상	X선 형광분석기	AFM diagram for study area (Irvine and Baragar, 1971). Symbols are shown in Fig. 15.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
580	site 1~6	Harker variation diagrams in study area. Symbols are shown in Fig. 15.	미상	X선 형광분석기	Harker variation diagrams in study area. Symbols are shown in Fig. 15.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
581	site 1~6	Photograph and sketch of measured columnar joint in site ①.	미상	X선 형광분석기	Photograph and sketch of measured columnar joint in site ①.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
582	site 1~6	Frequency (%) of measurement to columnar joints in site ① (Son, 2016).	미상	X선 형광분석기	Frequency (%) of measurement to columnar joints in site ① (Son, 2016).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
583	site 1~6	Sketch of measured columnar joint in site ④ (Son, 2016).	미상	X선 형광분석기	Sketch of measured columnar joint in site ④ (Son, 2016).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
584	site 1~6	Frequency (%) of measurement to columnar joints in site ④ (Son, 2016).	미상	X선 형광분석기	Frequency (%) of measurement to columnar joints in site ④ (Son, 2016).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
585	site 1~6	Sketch of columnar joint structure in site ① (dot line: isothermal lines).	미상	X선 형광분석기	Sketch of columnar joint structure in site ① (dot line: isothermal lines).	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
586	site 1~6	Forming processes of columnar joints in site ①. (a) volcano during eruption, ash and lava lumps fall, (b) welded and cooling processes, (c) formation of columnar joint	미상	X선 형광분석기	Forming processes of columnar joints in site ①. (a) volcano during eruption, ash and lava lumps fall, (b) welded and cooling processes, (c) formation of columnar joint	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
587	site 1~6	Sketch of columnar joint structure in site ⑥.	미상	X선 형광분석기	Sketch of columnar joint structure in site ⑥.	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
588	site 1~6	Major elemental analyses (wt.%) of columnar joints in study area	미상	X선 형광분석기	Major elemental analyses (wt.%) of columnar joints in study area	전라남도 고흥지역에 분포하는 주상절리에 관한 연구 (지구과학회지 Earth_v37n6p332)	34.719722 127.091667; 34.719722 127.575833; 34.398611 127.575833; 34.398611 127.091667
589	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	Geologic map of the study area. Red squares represent the sampling locations. BST=Baekseoktan, MA=Mananjaam, SSR=Sinseongri	프로그램 Iolie 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	Geologic map of the study area. Red squares represent the sampling locations. BST=Baekseoktan, MA=Mananjaam, SSR=Sinseongri	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 쇄설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278
590	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	Thin section photographs of the samples. A: BST-3, B, BST-2, C: MA-1, D: SSR-1. Q: quartz, Pl: plagioclase, Bt: biotite, C: chert fragment, VRF: volcanic rock fragment, DC: diagenetic calcite.	프로그램 Iolie 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	Thin section photographs of the samples. A: BST-3, B, BST-2, C: MA-1, D: SSR-1. Q: quartz, Pl: plagioclase, Bt: biotite, C: chert fragment, VRF: volcanic rock fragment, DC: diagenetic calcite.	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 쇄설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278
591	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	The histograms and probability density curves for the detrital zircon age distribution. A: the age distributions on a full time scale, B: the age distributions on an expanded time scale from the Permian to the Cretaceous.	프로그램 Iolie 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	The histograms and probability density curves for the detrital zircon age distribution. A: the age distributions on a full time scale, B: the age distributions on an expanded time scale from the Permian to the Cretaceous.	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 쇄설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278
592	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	A: the concordia diagrams for the detrital zircon ages. B: the weighted mean ages of the youngest zircon age groups for the Sagok Formation and the Jeomgok Formation.	프로그램 Iolie 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	A: the concordia diagrams for the detrital zircon ages. B: the weighted mean ages of the youngest zircon age groups for the Sagok Formation and the Jeomgok Formation.	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 쇄설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278
593	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	The geologic map showing the ages of plutonic rocks near the study area. Note the paleocurrent directions (red arrows).	프로그램 Iolie 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	The geologic map showing the ages of plutonic rocks near the study area. Note the paleocurrent directions (red arrows).	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 쇄설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
594	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	Depositional ages of the Hayang Group by biochronology	프로그램 Iolite 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	Depositional ages of the Hayang Group by biochronology	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 채설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278
595	BST-1-1~100/2-1~100/3-1~100, MA-1-1~93/2-1~95, SSR-1-1~95	Detrital zircon U-Pb ages of the Iljik, Jeomgok, and Sagok formations in the Cheongsong UNESCO Global Geopark, Korea	프로그램 Iolite 2.5(Paton et al., 2011), 프로그램 Isoplot 3.71 (Ludwig, 2008)	시료채취, LA-MC-ICP-MS(레이저 삭마 유도결합 플라즈마 질량분석기), 현미경조사	Detrital zircon U-Pb ages of the Iljik, Jeomgok, and Sagok formations in the Cheongsong UNESCO Global Geopark, Korea	청송 세계지질공원 내 백악기 일직층, 점곡층, 사곡층의 채설성 저어콘 U-Pb 연령: 퇴적시기와 기원지 (지구과학회지 Earth_v42n1p011)	36.381389 128.860278; 36.381389 129.065278; 36.231667 129.065278; 36.231667 128.860278
596	UE-A/C/D/E	(a) Simplified tectonic province map of the Korean Peninsula (adapted from Kee et al., 2019). The outlined area is shown in Fig. 1b. (b) Geologic map of the northern part of the Dangjin-Daesan area (modified from Kim et al., 2018). (c) Enlarged geologic map of study area in Fig. 1b showing location of studied outcrop (N37°17'02.83", E126°44'05.61").	미상	XRF	(a) Simplified tectonic province map of the Korean Peninsula (adapted from Kee et al., 2019). The outlined area is shown in Fig. 1b. (b) Geologic map of the northern part of the Dangjin-Daesan area (modified from Kim et al., 2018). (c) Enlarged geologic map of study area in Fig. 1b showing location of studied outcrop (N37°17'02.83", E126°44'05.61").	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
597	UE-A/C/D/E	Representative outcrop showing some granite dikes and sample locations. (a) Drone view of outcrop showing the crosscutting relationships among the granite dikes and banded gneiss. (b) Detailed surface sketch of drone view. For scale refer to the people on the observatory deck in (a).	미상	XRF	Representative outcrop showing some granite dikes and sample locations. (a) Drone view of outcrop showing the crosscutting relationships among the granite dikes and banded gneiss. (b) Detailed surface sketch of drone view. For scale refer to the people on the observatory deck in (a).	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
598	UE-A/C/D/E	Outcrop photographs showing the cross-cutting relationships among the granite dikes (UE-A, -C, -D, and -E) and banded gneiss (UE-B).	미상	XRF	Outcrop photographs showing the cross-cutting relationships among the granite dikes (UE-A, -C, -D, and -E) and banded gneiss (UE-B).	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
599	UE-A/C/D/E	Thin-section photomicrographs of granite dikes (under crossed polars, X40). Bt, biotite; Mc, microcline; Ms, muscovite; Pl, plagioclase; Qtz, quartz; Op, opaque mineral.	미상	XRF	Thin-section photomicrographs of granite dikes (under crossed polars, X40). Bt, biotite; Mc, microcline; Ms, muscovite; Pl, plagioclase; Qtz, quartz; Op, opaque mineral.	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
600	UE-A/C/D/E	Major elements versus SiO ₂ for the Jurassic granite dikes in the Ueumdo.	미상	XRF	Major elements versus SiO ₂ for the Jurassic granite dikes in the Ueumdo.	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
601	UE-A/C/D/E	(a) Primitive mantle-normalized trace element and (b) chondrite-normalized rare earth element patterns (Sun and McDonough 1989) for the Jurassic granite dikes in the Ueumdo.	미상	XRF	(a) Primitive mantle-normalized trace element and (b) chondrite-normalized rare earth element patterns (Sun and McDonough 1989) for the Jurassic granite dikes in the Ueumdo.	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
602	UE-A/C/D/E	(a-d) Concordia diagrams of SHRIMP U-Pb isotopic analyses of zircons from the Jurassic granite dikes in the Ueumdo, (e) the compiled 206Pb/238U weighted mean ages with error range calculated from the youngest clusters of each sample.	미상	XRF	(a-d) Concordia diagrams of SHRIMP U-Pb isotopic analyses of zircons from the Jurassic granite dikes in the Ueumdo, (e) the compiled 206Pb/238U weighted mean ages with error range calculated from the youngest clusters of each	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
603	UE-A/C/D/E	Major element classification diagrams for the Jurassic granite dikes in Ueumdo. (a) Total alkali (Na ₂ O+K ₂ O) versus silica (SiO ₂), (b) (Na ₂ O+K ₂ O-CaO) versus SiO ₂ , (c) FeOtotal/(FeOtotal +MgO) versus SiO ₂ , (d) molar Al ₂ O ₃ /(Na ₂ O+K ₂ O) versus molar Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O). Symbols are the same as those in Fig. 6.	미상	XRF	Major element classification diagrams for the Jurassic granite dikes in Ueumdo. (a) Total alkali (Na ₂ O+K ₂ O) versus silica (SiO ₂), (b) (Na ₂ O+K ₂ O-CaO) versus SiO ₂ , (c) FeOtotal/(FeOtotal +MgO) versus SiO ₂ , (d) molar Al ₂ O ₃ /(Na ₂ O+K ₂ O) versus molar Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O). Symbols are	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
604	UE-A/C/D/E	(a) Sr/Y versus Y discrimination diagram, and (b) La/Yb versus Yb discrimination diagram of the Jurassic granite dikes in the Ueumdo.	미상	XRF	(a) Sr/Y versus Y discrimination diagram, and (b) La/Yb versus Yb discrimination diagram of the Jurassic granite dikes in the Ueumdo.	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
605	UE-A/C/D/E	Plot of Rb vs. Sr for the Jurassic granite dikes in Ueumdo.	미상	XRF	Plot of Rb vs. Sr for the Jurassic granite dikes in Ueumdo.	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
606	UE-A/C/D/E	Rb versus Y+Nb tectonic discrimination diagram for the Jurassic granite dikes in Ueumdo. VAG, volcanic arc granites; ORG, oceanic ridge granites; WPG, within plate granites; syn-COLG, syn-collision granites.	미상	XRF	Rb versus Y+Nb tectonic discrimination diagram for the Jurassic granite dikes in Ueumdo. VAG, volcanic arc granites; ORG, oceanic ridge granites; WPG, within plate granites; syn-COLG, syn-	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
607	UE-A/C/D/E	(a) Spatial distribution of the plutons from the Triassic to Cretaceous period of the Korean Peninsula, (b) schematic model of tectonomagmatic evolution of the Korean peninsula, expressed as the gradual slab shallowing during the Middle Jurassic.	미상	XRF	(a) Spatial distribution of the plutons from the Triassic to Cretaceous period of the Korean Peninsula, (b) schematic model of tectonomagmatic evolution of the Korean peninsula, expressed as the gradual slab shallowing during the	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
608	UE-A/C/D/E	Major element oxides (wt%), trace element, and rare earth element (in ppm) of the granite dikes in the Ueumdo, Hwaseong, Korea	미상	XRF	Major element oxides (wt%), trace element, and rare earth element (in ppm) of the granite dikes in the Ueumdo, Hwaseong, Korea	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
609	UE-A/C/D/E	SHRIMP zircon U-Pb ages of granite dikes showing cross-cutting relationship in the Ueumdo	미상	XRF	SHRIMP zircon U-Pb ages of granite dikes showing cross-cutting relationship in the Ueumdo	경기도 화성시 우음도 일원의 화강암 암맥군과 U-Pb 연령 (지구과학회지 Earth_v43n5p618)	37.284119 126.734892
610	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Outcrop photographs and photomicrograph of the rhyolitic volcanic breccia in Yeongdo island. (a) Rhyolitic volcanic breccia outcrop of lisan peak. (b) Weakly welded structure. (c) and (d) Porphyritic texture with phenocrysts of plagioclase, orthoclase and quartz with embayed structure. [Pl, plagioclase; Q, quartz; Or, orthoclase]	미상	XRF, ICP	Outcrop photographs and photomicrograph of the rhyolitic volcanic breccia in Yeongdo island. (a) Rhyolitic volcanic breccia outcrop of lisan peak. (b) Weakly welded structure. (c) and (d) Porphyritic texture with phenocrysts of plagioclase, orthoclase and quartz with embayed structure. [Pl, plagioclase; Q, quartz; Or, orthoclase]	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
611	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Outcrop photographs and photomicrograph of the rhyolitic welded tuff in Yeongdo island (100~200 m). (a) Rhyolitic welded tuff with angular rock fragment. (b) Fiamme structure. (c) and (d) Welded structure. (e) Sanidine with Carlsbad twins. (f) Plagioclase in the euhedral shape with albite twins.	미상	XRF, ICP	Outcrop photographs and photomicrograph of the rhyolitic welded tuff in Yeongdo island (100~200 m). (a) Rhyolitic welded tuff with angular rock fragment. (b) Fiamme structure. (c) and (d) Welded structure. (e) Sanidine with Carlsbad twins. (f) Plagioclase in the euhedral shape with albite twins.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
612	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Outcrop photographs and photomicrograph of the rhyolitic welded tuff in Yeongdo island (200~300 m). (a) Rhyolitic welded tuff with lapili. (b) Fiamme structure in the matrix. (c) Rhyolitic welded tuff that develops flow foliation. (d) Porphyritic texture with phenocrysts of plagioclase, orthoclase and quartz. (e) Welded structure. (f) Embayed structure of quartz by being corrosion.	미상	XRF, ICP	Outcrop photographs and photomicrograph of the rhyolitic welded tuff in Yeongdo island (200~300 m). (a) Rhyolitic welded tuff with lapili. (b) Fiamme structure in the matrix. (c) Rhyolitic welded tuff that develops flow foliation. (d) Porphyritic texture with phenocrysts of plagioclase, orthoclase and quartz. (e) Welded structure. (f) Embayed structure of quartz by being	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
613	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Outcrop photograph and photomicrographs of the rhyolitic welded tuff in Yeongdo island (300~400 m). (a) Rhyolitic welded tuff with groundmass. (b) Sanidine with carlsbad twins, Plagioclase with albite twins. (d) Sericite that appears as a result of weathering feldspar. [Pl, plagioclase; Q, quartz; Or, orthoclase; Lf, lithic fragment]	미상	XRF, ICP	Outcrop photograph and photomicrographs of the rhyolitic welded tuff in Yeongdo island (300~400 m). (a) Rhyolitic welded tuff with groundmass. (b) Sanidine with carlsbad twins, Plagioclase with albite twins. (d) Sericite that appears as a result of weathering feldspar. [Pl, plagioclase; Q, quartz; Or, orthoclase; Lf, lithic	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
614	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Total alkalis vs. SiO ₂ (wt.%) plotting (Le Maitre et al., 1989) for the volcanic rocks in the Yeongdo island. [B, basalt; BA, basaltic andesite; An, andesite; Da, dacite; Rh, rhyolite; TB, trachybasalt; BT, basaltic trachyandesite; TA, trachyandesite; Tr, trachyte]. Symbols: RWT (○), rhyolitic welded tuff; 100~200 m, RWT(△), rhyolitic welded tuff; 200~300 m, RWT (□), rhyolitic welded tuff; 300~400 m, RVB(●), rhyolitic volcanic breccia; AVB(▲), andesitic volcanic breccia.	미상	XRF, ICP	Total alkalis vs. SiO ₂ (wt.%) plotting (Le Maitre et al., 1989) for the volcanic rocks in the Yeongdo island. [B, basalt; BA, basaltic andesite; An, andesite; Da, dacite; Rh, rhyolite; TB, trachybasalt; BT, basaltic trachyandesite; TA, trachyandesite; Tr, trachyte]. Symbols: RWT (○), rhyolitic welded tuff; 100~200 m, RWT(△), rhyolitic welded tuff; 200~300 m, RWT (□), rhyolitic welded tuff; 300~400 m, RVB(●), rhyolitic volcanic breccia; AVB(▲), andesitic	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
615	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	SiO ₂ (wt.%) vs. Zr/TiO ₂ ×0.0001 plotting for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	미상	XRF, ICP	SiO ₂ (wt.%) vs. Zr/TiO ₂ ×0.0001 plotting for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
616	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	AFM diagram for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	미상	XRF, ICP	AFM diagram for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833

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617	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Haker variation diagrams of the major elements for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	미상	XRF, ICP	Haker variation diagrams of the major elements for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
618	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Primitive mantle nomalized spider diagram for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7 (Red line = rhyolitic volcanic rocks and Blue line = andesitic volcanic rock).	미상	XRF, ICP	Primitive mantle nomalized spider diagram for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7 (Red line = rhyolitic volcanic rocks and Blue line = andesitic volcanic rock).	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
619	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Chondrite nomalized spider diagram for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7 (Red line = rhyolitic volcanic rocks and Blue line = andesitic volcanic rock).	미상	XRF, ICP	Chondrite nomalized spider diagram for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7 (Red line = rhyolitic volcanic rocks and Blue line = andesitic volcanic rock).	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
620	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	(Ce/Yb)N-CeN correlation diagram distinguishing between general petrogenic processes (after Gill, 1981) (1; Effects of fractional crystallization, 2; Compositions of partial melts of peridotite, 3; compositions of partial melts of eclogite, 4; Compositions of partial melts of average continental crust). Symbols are shown in Fig. 7.	미상	XRF, ICP	(Ce/Yb)N-CeN correlation diagram distinguishing between general petrogenic processes (after Gill, 1981) (1; Effects of fractional crystallization, 2; Compositions of partial melts of peridotite, 3; compositions of partial melts of eclogite, 4; Compositions of partial melts of average continental crust). Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
621	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	La/Yb-La correlation diagram showing two different lines of both partial melting trend and differentiation trend (after Martin, 1987). Symbols are shown in Fig. 7.	미상	XRF, ICP	La/Yb-La correlation diagram showing two different lines of both partial melting trend and differentiation trend (after Martin, 1987). Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
622	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Discriminant diagram of Rb vs. Y+Nb showing the apparent affinity of volcanic arc for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	미상	XRF, ICP	Discriminant diagram of Rb vs. Y+Nb showing the apparent affinity of volcanic arc for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
623	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Hf/3-Th-Nb/16 tectonic discrimination diagrams for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	미상	XRF, ICP	Hf/3-Th-Nb/16 tectonic discrimination diagrams for the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
624	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Diagrams showing vertical compositional variations for major elements from the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7. Based on the inflection points 1 to 4, the increase or decrease of the component content occurs.	미상	XRF, ICP	Diagrams showing vertical compositional variations for major elements from the volcanic rocks in the Yeongdo island. Symbols are shown in Fig. 7. Based on the inflection points 1 to 4, the increase or decrease of the component content occurs.	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
625	BR101~107, BR201-208, BR301~304, ISB, TJ-1/2	Major element abundances (wt.%) and CIPW norm of the volcanic rocks in the Yeongdo island	미상	XRF, ICP	Major element abundances (wt.%) and CIPW norm of the volcanic rocks in the Yeongdo island	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
626	BR101~107, BR201~208, BR301~304, ISB, TJ-1/2	Trace element and rare earth element abundances(ppm) of the volcanic rocks in the Yeongdo island	미상	XRF, ICP	Trace element and rare earth element abundances(ppm) of the volcanic rocks in the Yeongdo island	부산 영도 일대의 백악기 화산암류에 대한 암석학적 연구(광물과암석 MinPet_v34n4p293)	35.102500 129.030833; 35.102500 129.095833; 35.049167 129.095833; 35.049167 129.030833
627	Pgt1 U-1/6	(a) Simplified tectonic regions of the Korean Peninsula. NM = Nangrim Massif, PB = Pyeongnam Basin, GM = Gyeonggi massif, IB = Imjingang Belt, OB = Okcheon basin, TB = Taebaeksan basin, YM = Yeongnam massif, GB = yeongsang basin. (b) Regional geology of the Boam Li deposit (modified from Kim et al., 1963 and Moon et al., 1996). The dashed box 'c' indicates the area of Fig. 1c. (c) Detailed geological map of the inbox 'c' in Fig. 1b. The dashed box 'd' indicates the location of the Boam Li deposit. (d) Locations of the three main ore bodies of the Boam Li deposit shown as the inbox 'd' in Fig. 1c (modified from Oh et al., 2022). The white circles are the sampling sites of spodumene pegmatite (Pgt1), exogreisen (U-1), and wall rock (U6).	미상	EPS	(a) Simplified tectonic regions of the Korean Peninsula. NM = Nangrim Massif, PB = Pyeongnam Basin, GM = Gyeonggi massif, IB = Imjingang Belt, OB = Okcheon basin, TB = Taebaeksan basin, YM = Yeongnam massif, GB = yeongsang basin. (b) Regional geology of the Boam Li deposit (modified from Kim et al., 1963 and Moon et al., 1996). The dashed box 'c' indicates the area of Fig. 1c. (c) Detailed geological map of the inbox 'c' in Fig. 1b. The dashed box 'd' indicates the location of the Boam Li deposit. (d) Locations of the three main ore bodies of the Boam Li deposit shown as the inbox 'd' in Fig. 1c (modified from Oh et al., 2022). The white circles are the sampling sites of spodumene pegmatite (Pgt1),	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
628	Pgt1 U-1/6	Backscattered electron (BSE) images of Pgt1. (a) Anhedral muscovite (Ms), K-feldspar (K-fsp2), and apatite (Apt) lying parallel to the cleavage plane of spodumene (Spd) surrounded by fine-grained albite (Ab2). (b) Apatite and columbite group mineral (CGM) along the boundary between spodumene and Ab2. (c) Beryl core with normal zoning (Br1). Br1 is partly replaced by Br12. (d) Anhedral albite whose shape is constrained by the cleavage plane of an adjacent spodumene grain. The CGM grain is magnified in Fig. 3h. (e) Medium-grained K-feldspar (K-fsp1) with albite grains lying obliquely to the grain boundary of K-fsp1. Anhedral Ab2, muscovite, and apatite inclusions are found along the microcracks of K-fsp1. (f) Beryl core (Br1) is replaced by rim (Br12). Br12 hosts apatite inclusions. (g) Close view of the apatite in Fig. 3e. (h) CGM showing the two-stage growth pattern. CGM2 crosscuts CGM1. Cst = cassiterite, Mcl = microlite.	미상	EPS	Backscattered electron (BSE) images of Pgt1. (a) Anhedral muscovite (Ms), K-feldspar (K-fsp2), and apatite (Apt) lying parallel to the cleavage plane of spodumene (Spd) surrounded by fine-grained albite (Ab2). (b) Apatite and columbite group mineral (CGM) along the boundary between spodumene and Ab2. (c) Beryl core with normal zoning (Br1). Br1 is partly replaced by Br12. (d) Anhedral albite whose shape is constrained by the cleavage plane of an adjacent spodumene grain. The CGM grain is magnified in Fig. 3h. (e) Medium-grained K-feldspar (K-fsp1) with albite grains lying obliquely to the grain boundary of K-fsp1. Anhedral Ab2, muscovite, and apatite inclusions are found along the microcracks of K-fsp1. (f) Beryl core (Br1) is replaced by rim (Br12). Br12 hosts apatite inclusions. (g) Close view of the apatite in Fig. 3e. (h) CGM showing the two-stage growth pattern. CGM2 crosscuts CGM1. Cst = cassiterite, Mcl = microlite.	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
629	Pgt1 U-1/6	(a) Thin section billet of Janggun limestone (U-6) sampled in the site shown in Fig. 2b. (b) BSE image of the box 'b' shown in (a). (c) Thin section billet of exogreisen (U-1) in contact with Pgt1. (d) BSE image of the box 'd' shown in (c).	미상	EPS	(a) Thin section billet of Janggun limestone (U-6) sampled in the site shown in Fig. 2b. (b) BSE image of the box 'b' shown in (a). (c) Thin section billet of exogreisen (U-1) in contact with Pgt1. (d) BSE image of the box 'd'	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
630	Pgt1 U-1/6	(a) Feldspar ternary diagram showing the compositions of feldspar in Pgt1. Symbols are the same as Fig. 5d. (b) Albite composition in Pgt1. (c) K-feldspar composition in Pgt1. (d) Binary plot of P and Ca (apfu, atoms per formula unit) contents in albites in Pgt1. The dashed line represents mixing between apatite and albite. Arrows to the top and right indicate the compositional variations for berlinite substitution ($P5+ + Al3+ = 2Si4+$) and albite-anorthite solid solution, respectively	미상	EPS	(a) Feldspar ternary diagram showing the compositions of feldspar in Pgt1. Symbols are the same as Fig. 5d. (b) Albite composition in Pgt1. (c) K-feldspar composition in Pgt1. (d) Binary plot of P and Ca (apfu, atoms per formula unit) contents in albites in Pgt1. The dashed line represents mixing between apatite and albite. Arrows to the top and right indicate the compositional variations for berlinite substitution ($P5+ + Al3+ = 2Si4+$) and albite-anorthite solid solution,	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
631	Pgt1 U-1/6	Binary plot of 'total iron as a ferrous ion + Mn + Ti-Al in tetrahedral site' and 'Mg-Li' in apfu. Dashed line at $y = -3$ is the compositional boundary between muscovite and phlogopite suggested by Tischendorf et al. (199	미상	EPS	Binary plot of 'total iron as a ferrous ion + Mn + Ti-Al in tetrahedral site' and 'Mg-Li' in apfu. Dashed line at $y = -3$ is the compositional boundary between muscovite and phlogopite suggested by Tischendorf et al. (199	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
632	Pgt1 U-1/6	Core-rim variation in Cs2O contents of (a) beryl#1 and (b) beryl#2 in Table A6.	미상	EPS	Core-rim variation in Cs2O contents of (a) beryl#1 and (b) beryl#2 in Table A6.	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
633	Pgt1 U-1/6	(a) BSE image of a CGM grain. The red circles and blue diamonds represent EDS spots of CGM1 and CGM2, respectively. (b) Core-rim variations in molar Ta/(Nb+Ta) ratios of CGM. (c) Core-rim variations in molar Mn/(Mn+Fe) ratios of CGM. (d) Binary plot of molar Ta/(Nb+Ta) and Mn/(Mn+Fe) ratios of seven CGM grains. The data are reported in Table A8. Solid arrow indicates the compositional variation defined by CGM1. Thin dashed arrows display compositional variation defined by CGM2.	미상	EPS	(a) BSE image of a CGM grain. The red circles and blue diamonds represent EDS spots of CGM1 and CGM2, respectively. (b) Core-rim variations in molar Ta/(Nb+Ta) ratios of CGM. (c) Core-rim variations in molar Mn/(Mn+Fe) ratios of CGM. (d) Binary plot of molar Ta/(Nb+Ta) and Mn/(Mn+Fe) ratios of seven CGM grains. The data are reported in Table A8. Solid arrow indicates the compositional variation defined by CGM1. Thin dashed arrows display compositional variation defined	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
634	Pgt1 U-1/6	(a) BSE image of tourmaline in the exogreisen. Line scan is conducted along the yellow arrow. (b) Binary plot of divalent cations and vacancy + aluminium (apfu) analyzed along the yellow arrow of Fig. 9a. Data are reported at Table A10.	미상	EPS	(a) BSE image of tourmaline in the exogreisen. Line scan is conducted along the yellow arrow. (b) Binary plot of divalent cations and vacancy + aluminium (apfu) analyzed along the yellow arrow of Fig. 9a. Data are	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
635	Pgt1 U-1/6	Binary plot of Na/Li ratios and Cs contents of beryl from Pgt1. The compositions of primary beryl crystallized during the early magma emplacement and secondary beryl crystallized in miaroles during the late stage of magma emplacement are shown for comparison. A = barren and geo ₁ chemically primitive beryl-type pegmatites, B = geochemically evolved beryl-columbite and beryl-columbite-phosphate pegmatites, C = albite-spodumene and complex pegmatites, D = highly fractionated Li, Cs, Ta-rich complex pegmatites.	미상	EPS	Binary plot of Na/Li ratios and Cs contents of beryl from Pgt1. The compositions of primary beryl crystallized during the early magma emplacement and secondary beryl crystallized in miaroles during the late stage of magma emplacement are shown for comparison. A = barren and geo ₁ chemically primitive beryl-type pegmatites, B = geochemically evolved beryl-columbite and beryl-columbite-phosphate pegmatites, C = albite-spodumene and complex pegmatites, D = highly fractionated Li, Cs, Ta-rich	울진 보암광산의 조장석-스포듀민 페그마타이트의 광물 지화학 조성 연구(광물 과암석 MinPet_v35n3p283)	36.950000 129.100000; 36.950000 129.300000; 36.800000 129.300000; 36.800000 129.100000;
636	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Simplified tectonic regions of the Korean peninsula and geological map showing the study area, Yeongdong (modified 1:50,000 geological map from the Korea Institute of Geoscience and Mineral Resources). NM=Nangrim Massif, PB=Pyeongnam Basin, IB=Imjingang Belt, GM=Gyonggi Massif, OB=Okcheon Basin, TB=Taebaeksan Basin, YM=Yeongnam Massif, GB=Gyeongsang Basin, GDR=Gadong-ri, JGR=Jugok-ri.	미상	XRF, XRD	Simplified tectonic regions of the Korean peninsula and geological map showing the study area, Yeongdong (modified 1:50,000 geological map from the Korea Institute of Geoscience and Mineral Resources). NM=Nangrim Massif, PB=Pyeongnam Basin, IB=Imjingang Belt, GM=Gyonggi Massif, OB=Okcheon Basin, TB=Taebaeksan Basin, YM=Yeongnam Massif, GB=Gyeongsang Basin, GDR=Gadong-ri, JGR=Jugok-ri.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
637	GA-1~7, JB-1~4, JC-1~4, JD-1/2	The red line shows fault in Gadong-ri ore deposit (a) and Jugok-ri ore deposit (b). The yellow arrow shows the normal fault.	미상	XRF, XRD	The red line shows fault in Gadong-ri ore deposit (a) and Jugok-ri ore deposit (b). The yellow arrow shows the normal fault.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
638	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Representative illite ore deposit (Site A, B) samples image in Gadong-ri (a-b) and Jugok-ri (c-d). Representative illite alteration zone (Site C, D) samples image in Jugok-ri (e-h).	미상	XRF, XRD	Representative illite ore deposit (Site A, B) samples image in Gadong-ri (a-b) and Jugok-ri (c-d). Representative illite alteration zone (Site C, D) samples image in Jugok-ri (e-h).	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
639	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Microscopic photographs of Gadong-ri illite ore deposit samples (Site A) in crossed nicols. Ill=Illite, Ms=Muscovite, Qz=Quartz, Pl=Plagioclase.	미상	XRF, XRD	Microscopic photographs of Gadong-ri illite ore deposit samples (Site A) in crossed nicols. Ill=Illite, Ms=Muscovite, Qz=Quartz, Pl=Plagioclase.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
640	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Microscopic photographs of Jugok-ri illite ore deposit samples (Site B) in crossed nicols (a-e) and parallel nicols (f). Ill=Illite, Ms=Muscovite, Qz=Quartz, Pl=Plagioclase.	미상	XRF, XRD	Microscopic photographs of Jugok-ri illite ore deposit samples (Site B) in crossed nicols (a-e) and parallel nicols (f). Ill=Illite, Ms=Muscovite, Qz=Quartz, Pl=Plagioclase.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
641	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Microscopic photographs of Jugok-ri illite alteration zone samples, Site C (a-b) and Site D (c-d) in crossed nicols. Ill=Illite, Ms=Muscovite, Qz=Quartz, Pl=Plagioclase.	미상	XRF, XRD	Microscopic photographs of Jugok-ri illite alteration zone samples, Site C (a-b) and Site D (c-d) in crossed nicols. Ill=Illite, Ms=Muscovite, Qz=Quartz, Pl=Plagioclase.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
642	GA-1~7, JB-1~4, JC-1~4, JD-1/2	X-ray diffraction patterns of representative samples in Gadong-ri ore deposit (GA-5), Jugok-ri ore deposit (JB-3), and alteration zone (JC-1, JD-1). Ill=Illite, Ms=Muscovite, Qtz=Quartz, Pl=Plagioclase, Mc=Microcline.	미상	XRF, XRD	X-ray diffraction patterns of representative samples in Gadong-ri ore deposit (GA-5), Jugok-ri ore deposit (JB-3), and alteration zone (JC-1, JD-1). Ill=Illite, Ms=Muscovite, Qtz=Quartz, Pl=Plagioclase, Mc=Microcline.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
643	GA-1~7, JB-1~4, JC-1~4, JD-1/2	SIROQUANT output showing comparison of observed XRD trace (black), calculated trace (red), and difference between them (blue).	미상	XRF, XRD	SIROQUANT output showing comparison of observed XRD trace (black), calculated trace (red), and difference between them (blue).	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
644	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Changes in average constituent minerals of illite ore samples in study area (reflecting all 18 ore samples indicated in Table 1).	미상	XRF, XRD	Changes in average constituent minerals of illite ore samples in study area (reflecting all 18 ore samples indicated in Table 1).	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
645	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Correlation of illite (wt.%) with major element oxides from X-ray fluorescence spectrometer (XRF). Red solid circles=Expect Fe2O3 rich samples in Site A, Red solid triangles=Fe2O3 rich samples in Site A, Red open circles=Site B, Black solid circles=Site C, Black open circles=Site D.	미상	XRF, XRD	Correlation of illite (wt.%) with major element oxides from X-ray fluorescence spectrometer (XRF). Red solid circles=Expect Fe2O3 rich samples in Site A, Red solid triangles=Fe2O3 rich samples in Site A, Red open circles=Site B, Black solid circles=Site C, Black open circles=Site D.	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
646	GA-1~7, JB-1~4, JC-1~4, JD-1/2	Mineral compositions (wt.%) of illite ore samples in the study area	미상	XRF, XRD	Mineral compositions (wt.%) of illite ore samples in the study area	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
647	GA-1~7, JB-1~4, JC-1~4, JD-1/2	The chemical compositions (wt.%) of illite ore samples in the study area from XRF analysis	미상	XRF, XRD	The chemical compositions (wt.%) of illite ore samples in the study area from XRF analysis	영동 일라이트 광체의 구성광물 및 일라이트화 특성 연구(광물과암석 MinPet_v36n1p041)	36.183333 127.757222; 36.183333 127.836667; 36.140278 127.836667; 36.140278 127.757222
648	MG1~6	(a) Schematic map showing various tectonic provinces and granitoids in the southern Korean Peninsula (modified from Aum et al., 2019). Abbreviations: IB, Imjingang Belt; GM, Gyeonggi Massif; OB, Ogcheon Belt; YM, Yeongnam Massif; GB, Gyeongsang Basin. (b) The geological map of the Mungyeong city area showing sample locations (modified from Kim et al., 1967; Lee and Kim, 1972; Lee and Kim, 1968; Shin and Choi, 1968; Yoo and Hong, 1973; Yun et al., 1988).	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	(a) Schematic map showing various tectonic provinces and granitoids in the southern Korean Peninsula (modified from Aum et al., 2019). Abbreviations: IB, Imjingang Belt; GM, Gyeonggi Massif; OB, Ogcheon Belt; YM, Yeongnam Massif; GB, Gyeongsang Basin. (b) The geological map of the Mungyeong city area showing sample locations (modified from Kim et al., 1967; Lee and Kim, 1972; Lee and Kim, 1968; Shin and Choi, 1968; Yoo and Hong, 1973; Yun et	문경지질공원 쌍룡계곡, 용추계곡, 문경새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
649	MG1~6	Photomicrographs of the analysed samples. (a, b) MG1 and MG2, felsic porphyries, respectively and (c) MG3, biotite granite in the Ssangyong valley. (d) MG4, biotite granite and (e) MG5, felsic dike in the Yongchu valley. (f) MG6, biotite granite showing porphyritic texture. (a-e) Plane and (f) cross polarized litght. Abbreviations: Bt, biotite; Chl, chlorite; fs, feldspars; G, granophyre; Kfs, K-feldspar; Pl, plagioclase; S, spherulitic texture; Qtz, quartz.	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Photomicrographs of the analysed samples. (a, b) MG1 and MG2, felsic porphyries, respectively and (c) MG3, biotite granite in the Ssangyong valley. (d) MG4, biotite granite and (e) MG5, felsic dike in the Yongchu valley. (f) MG6, biotite granite showing porphyritic texture. (a-e) Plane and (f) cross polarized litght. Abbreviations: Bt, biotite; Chl, chlorite; fs, feldspars; G, granophyre; Kfs, K-feldspar; Pl, plagioclase; S, spherulitic texture; Qtz,	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
650	MG1~6	Cathodoluminescence images of zircons. (a) Felsic porphyries (MG1 and MG2) and biotite granite (MG3) from the Ssangyong valley. (b) Biotite granite (MG4) and felsic dike (MG5) from the Yongchu Valley. Two types of zircon grains separated from felsic dike showing dark and bright CL images. (c) Porphyritic granite from the Mungyeong Saejae (MG6). Spot numbers and apparent 206Pb/238U ages in Table 1 are shown in each image. Ellipses denote the analytical spots. Scale bars are 100 μ m.	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Cathodoluminescence images of zircons. (a) Felsic porphyries (MG1 and MG2) and biotite granite (MG3) from the Ssangyong valley. (b) Biotite granite (MG4) and felsic dike (MG5) from the Yongchu Valley. Two types of zircon grains separated from felsic dike showing dark and bright CL images. (c) Porphyritic granite from the Mungyeong Saejae (MG6). Spot numbers and apparent 206Pb/238U ages in Table 1 are shown in each image. Ellipses denote the analytical	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
651	MG1~6	Terra-Wasserburg plots of zircon from analyzed samples. (a-c) Felsic porphyries (MG1 and MG2) and biotite granite (MG3) around the Ssangyong Valley. (d, e) Biotite granite (MG4) and felsic dike (MG5) in the Yongchu Valley. (f) Porphyritic granite (MG6) in the Mungyeong Saejae.	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Terra-Wasserburg plots of zircon from analyzed samples. (a-c) Felsic porphyries (MG1 and MG2) and biotite granite (MG3) around the Ssangyong Valley. (d, e) Biotite granite (MG4) and felsic dike (MG5) in the Yongchu Valley. (f) Porphyritic granite (MG6) in the Mungyeong Saejae.	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
652	MG1~6	Harker diagram showing major element variations in the Mungyeong area together with previous data of the Cretaceous granitoids around the Ogcheon Belt (Lee et al., 2010; Aum et al., 2019).	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Harker diagram showing major element variations in the Mungyeong area together with previous data of the Cretaceous granitoids around the Ogcheon Belt (Lee et al., 2010; Aum et al., 2019).	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
653	MG1~6	(a) TAS diagram (Irvine and Baragar, 1971; Wilson, 1989). (b) A/NK [molar ratio $\text{Al}_2\text{O}_3/(\text{Na}_2\text{O}+\text{K}_2\text{O})$] vs. A/CNK [molar ratio $\text{Al}_2\text{O}_3/(\text{CaO}+\text{Na}_2\text{O}+\text{K}_2\text{O})$] diagram (Maniar and Piccoli, 1989). (c) Chondrite-normalized rare earth element (REE) variation diagram (Sun and McDonough, 1989). (d) Primitive mantle-normalized spider diagram (Sun and McDonough, 1989). Grey areas in each diagram represent compilation of geochemical data from the Cretaceous granitoids around the Ogcheon Belt (Lee et al., 2010; Aum et al., 2019).	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	(a) TAS diagram (Irvine and Baragar, 1971; Wilson, 1989). (b) A/NK [molar ratio $\text{Al}_2\text{O}_3/(\text{Na}_2\text{O}+\text{K}_2\text{O})$] vs. A/CNK [molar ratio $\text{Al}_2\text{O}_3/(\text{CaO}+\text{Na}_2\text{O}+\text{K}_2\text{O})$] diagram (Maniar and Piccoli, 1989). (c) Chondrite-normalized rare earth element (REE) variation diagram (Sun and McDonough, 1989). (d) Primitive mantle-normalized spider diagram (Sun and McDonough, 1989). Grey areas in each diagram represent compilation of geochemical data from the Cretaceous granitoids around the Ogcheon Belt (Lee et al., 2010; Aum et al., 2019).	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
654	MG1~6	(a) R1-R2 diagram (dashed lines; Batchelor and Bowden, 1985) and rock classification diagram (solid lines; De La Roche et al., 1980). (b) SiO_2 vs. FeO/MgO diagram (after Whalen et al., 1987; Wang et al., 2004). (c) $10000 \times \text{Ga}/\text{Al}$ vs. Zr plots of A-type granite (Whalen et al., 1987), (d) $\text{Zr}+\text{Nb}+\text{Ce}+\text{Y}$ vs. $(\text{K}_2\text{O}+\text{Na}_2\text{O})/\text{CaO}$ of A-type granite (Whalen, 1987). Abbreviations: FG, fractionated felsic granite; OGT, unfractionated M-, I-, S-type granites. (e, f) Variation of Sr-Rb and Sr-Ba concentration for the Cretaceous granitoids. Mineral vectors are calculated according to partition coefficients of biotite, K-feldspar and plagioclase from Keskin (2002). Reference data from Lee et al. (2010) and Aum et al. (2019).	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	(a) R1-R2 diagram (dashed lines; Batchelor and Bowden, 1985) and rock classification diagram (solid lines; De La Roche et al., 1980). (b) SiO_2 vs. FeO/MgO diagram (after Whalen et al., 1987; Wang et al., 2004). (c) $10000 \times \text{Ga}/\text{Al}$ vs. Zr plots of A-type granite (Whalen et al., 1987), (d) $\text{Zr}+\text{Nb}+\text{Ce}+\text{Y}$ vs. $(\text{K}_2\text{O}+\text{Na}_2\text{O})/\text{CaO}$ of A-type granite (Whalen, 1987). Abbreviations: FG, fractionated felsic granite; OGT, unfractionated M-, I-, S-type granites. (e, f) Variation of Sr-Rb and Sr-Ba concentration for the Cretaceous granitoids. Mineral vectors are calculated according to partition coefficients of biotite, K-feldspar and plagioclase from Keskin (2002).	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
655	MG1~6	Tectonic discrimination diagrams based on (a) Rb vs. $\text{Y}+\text{Nb}$ (b) Nb vs. Y, (c) Rb vs. $\text{Yb}+\text{Ta}$, and (d) Ta vs. Yb diagrams (Pearce et al., 1984; Pearce, 1996) together with compiled data of the Cretaceous granites around the Ogcheon belt (Lee et al., 2010; Aum et al., 2019).	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Tectonic discrimination diagrams based on (a) Rb vs. $\text{Y}+\text{Nb}$ (b) Nb vs. Y, (c) Rb vs. $\text{Yb}+\text{Ta}$, and (d) Ta vs. Yb diagrams (Pearce et al., 1984; Pearce, 1996) together with compiled data of the Cretaceous granites around the Ogcheon belt (Lee et al., 2010; Aum et al., 2019).	문경지질공원 쌍룡계곡, 용추계곡, 문경 새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
656	MG1~6	Simplified geologic map (modified from Lee et al., 2010) showing distribution of the Cretaceous igneous rocks and results of age dating around the Mungyeong Geopark. The SHRIMP U-Pb zircon (white diamond symbols), and Rb-Sr whole rock (gray rectangle symbols) ages of the Cretaceous igneous rocks are illustrated together with references: (a) Lee et al. (2010); (b) this study. (c) Green lines in the error bars are approximately weighted mean ages for each group.	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Simplified geologic map (modified from Lee et al., 2010) showing distribution of the Cretaceous igneous rocks and results of age dating around the Mungyeong Geopark. The SHRIMP U-Pb zircon (white diamond symbols), and Rb-Sr whole rock (gray rectangle symbols) ages of the Cretaceous igneous rocks are illustrated together with references: (a) Lee et al. (2010); (b) this study. (c) Green lines in the error bars are approximately weighted mean	문경지질공원 쌍룡계곡, 용추계곡, 문경새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
657	MG1~6	U-Th-Pb isotopic compositions of zircons	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	U-Th-Pb isotopic compositions of zircons	문경지질공원 쌍룡계곡, 용추계곡, 문경새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
658	MG1~6	Major and trace element composition of analyzed samples from the Mungyeong area	Squid, Isoplot/Ex	SEM, SHRIMP, ICP-MS, XRF	Major and trace element composition of analyzed samples from the Mungyeong area	문경지질공원 쌍룡계곡, 용추계곡, 문경새재 지질명소 화성암류의 SHRIMP 저어콘 U-Pb 연령과 지구화학(광물과암석 MinPet_v36n1p073)	36.881389 127.866944; 36.881389 128.398889; 36.553056 128.398889; 36.553056 127.866944
659	JG1~5	Geological map of the Janggun Pb-Zn deposit (Modified after Lee et al., 1990; Yoo, 2012; 2022).	미상	EPMA, XRD	Geological map of the Janggun Pb-Zn deposit (Modified after Lee et al., 1990; Yoo, 2012; 2022).	장군 연-아연 광상의 모암변질대내 탄산염 광물의 산상 및 화학조성(광물과암석 MinPet_v36n3p167)	36.857361 129.063611
660	JG1~5	Photograph of rock slab sample with Pb-Zn ore vein, wallrock alteration and wallrock from the Janggun Pb-Zn deposit (Modified after Yoo, 2012; 2022).	미상	EPMA, XRD	Photograph of rock slab sample with Pb-Zn ore vein, wallrock alteration and wallrock from the Janggun Pb-Zn deposit (Modified after Yoo, 2012; 2022).	장군 연-아연 광상의 모암변질대내 탄산염 광물의 산상 및 화학조성(광물과암석 MinPet_v36n3p167)	36.857361 129.063611

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*메타순서	*시료ID*	*제목*	*분석장비명 및 모델*	*분석방법	*자료설명	*참고문헌	*좌표*
661	JG1~5	BSEs of carbonate crystals showing different phases and paragenetic texture. (a)-(b) dark carbonate (Co type) replaced or sealed fractures by intermediate and white carbonate (C1 type and C3 type) coexisting with white mica, sphalerite and galena, (c) dark and intermediate carbonate (Co type and C1 type) coexisting with white mica replaced by white carbonate (C2 type), (d) dark and intermediate carbonate (Co type and C1 type) coexisting with white mica replaced by white carbonate (C3 type) coexisting with pyrite, which also replaced by white carbonate (C4 type), (e) dark carbonate (Co type) replaced by white carbonate (C1 type), which also replaced or sealed fractures by white carbonate (C2 type) coexisting with sphalerite and galena, (f) white carbonate (C3 type) replaced or sealed fractures by intermediate carbonate (C4 type) coexisting with galena, (g) intermediate carbonate (C1 type) coexisting with white mica replaced by white carbonate (C3 type) coexisting with pyrite, which also replaced by white carbonate (C4 type), (h) carbonate crystal (D3 type) with dark, intermediate and white phases coexisting with white mica and galena. Abbreviations; Gn = galena, Py = pyrite, Qz = quartz, Sp = sphalerite, WM = white mica. Red circles indicate quantitative analysis points.	미상	EPMA, XRD	BSEs of carbonate crystals showing different phases and paragenetic texture. (a)-(b) dark carbonate (Co type) replaced or sealed fractures by intermediate and white carbonate (C1 type and C3 type) coexisting with white mica, sphalerite and galena, (c) dark and intermediate carbonate (Co type and C1 type) coexisting with white mica replaced by white carbonate (C2 type), (d) dark and intermediate carbonate (Co type and C1 type) coexisting with white mica replaced by white carbonate (C3 type) coexisting with pyrite, which also replaced by white carbonate (C4 type), (e) dark carbonate (Co type) replaced by white carbonate (C1 type), which also replaced or sealed fractures by white carbonate (C2 type) coexisting with sphalerite and galena, (f) white carbonate (C3 type) replaced or sealed fractures by intermediate carbonate (C4 type) coexisting with galena, (g) intermediate carbonate (C1 type) coexisting with white mica replaced by white carbonate (C3 type) coexisting with pyrite, which also replaced by white carbonate (C4 type) coexisting with galena, (g) intermediate carbonate (C1 type) coexisting with white mica replaced by white carbonate (C3 type) coexisting with pyrite, which also replaced by white carbonate (C4 type)	장군 연-아연 광상의 모암변질대내 탄산염 광물의 산상 및 화학조성(광물과암석 MinPet_v36n3p167)	36.857361 129.063611
662	JG1~5	Ternary plots of carbonate compositions calculated from EPMA analyses with paragenetic sequence in alteration zone samples from the Janggun Pb-Zn deposit (Modified after Reinhold, 1998 and Biondi et al., 2013). Also is shown the carbonate data by Lee (1985). Arrows indicate the evolution direction of wallrock alteration.	미상	EPMA, XRD	Ternary plots of carbonate compositions calculated from EPMA analyses with paragenetic sequence in alteration zone samples from the Janggun Pb-Zn deposit (Modified after Reinhold, 1998 and Biondi et al., 2013). Also is shown the carbonate data by Lee (1985). Arrows indicate the evolution direction	장군 연-아연 광상의 모암변질대내 탄산염 광물의 산상 및 화학조성(광물과암석 MinPet_v36n3p167)	36.857361 129.063611
663	JG1~5	Binary plots of carbonate compositions from EPMA analyses with paragenetic sequence in alteration zone samples from the Janggun Pb-Zn deposit.	미상	EPMA, XRD	Binary plots of carbonate compositions from EPMA analyses with paragenetic sequence in alteration zone samples from the Janggun Pb-Zn deposit.	장군 연-아연 광상의 모암변질대내 탄산염 광물의 산상 및 화학조성(광물과암석 MinPet_v36n3p167)	36.857361 129.063611
664	JG1~5	Chemical composition of carbonates from the Janggun Pb-Zn deposit	미상	EPMA, XRD	Chemical composition of carbonates from the Janggun Pb-Zn deposit	장군 연-아연 광상의 모암변질대내 탄산염 광물의 산상 및 화학조성(광물과암석 MinPet_v36n3p167)	36.857361 129.063611

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
665	04-1	Generalized geological map of the Gubong Au-Ag deposit area, showing the orientation of the principal quartz veins (1 = Danbong vein, 2 = Yongma vein, 3 = Ganjuk vein, 4 = No. 6 vein, 5 = No. 1 vein, 6 = Bongam2 vein, 7 = Bongam1 vein, 8 = Gunryang vein) (Yoo et al., 2002; 2006).	미상	EPMA	Generalized geological map of the Gubong Au-Ag deposit area, showing the orientation of the principal quartz veins (1 = Danbong vein, 2 = Yongma vein, 3 = Ganjuk vein, 4 = No. 6 vein, 5 = No. 1 vein, 6 = Bongam2 vein, 7 = Bongam1 vein, 8 = Gunryang vein) (Yoo et al., 2002; 2006).	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
666	04-1	Microphotographs and BSEs of minerals representative for a depth of -275 ML, -593 ML, -642.5 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area. (a) pyrite and quartz in quartz vein found at a depth of -275 ML and -593 ML, (b)-(d) pyrrhotite, pyrite, macasite, chalcopryrite and quartz in quartz vein found at a depth of -642.5 ML and -779 ML, (e)-(f) rutile coexisting with chlorite, white mica, K-feldspar, quartz and calcite in alteration zone found at a depth of -275 ML sample, (g)-(i) ilmenite and rutile coexisting with chlorite, white mica, apatite, zircon, quartz and calcite in alteration zone and quartz vein found at a depth of -779 ML sample. Abbreviations; Ap = apatite, Cal = calcite, Chl = chlorite, Cp = chalcopryrite, Ilm = ilmenite, Kfs = K-feldspar, Ma = macasite, Po = pyrrhotite, Py = pyrite, Qz = quartz, Rt = rutile, WM = white mica, Zrn = zircon. Yellow circles and numbers indicate quantitative analysis points.	미상	EPMA	Microphotographs and BSEs of minerals representative for a depth of -275 ML, -593 ML, -642.5 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area. (a) pyrite and quartz in quartz vein found at a depth of -275 ML and -593 ML, (b)-(d) pyrrhotite, pyrite, macasite, chalcopryrite and quartz in quartz vein found at a depth of -642.5 ML and -779 ML, (e)-(f) rutile coexisting with chlorite, white mica, K-feldspar, quartz and calcite in alteration zone found at a depth of -275 ML sample, (g)-(i) ilmenite and rutile coexisting with chlorite, white mica, apatite, zircon, quartz and calcite in alteration zone and quartz vein found at a depth of -779 ML sample. Abbreviations; Ap = apatite, Cal = calcite, Chl = chlorite, Cp = chalcopryrite, Ilm = ilmenite, Kfs = K-feldspar, Ma = macasite, Po = pyrrhotite, Py = pyrite, Qz = quartz, Rt = rutile, WM = white mica, Zrn = zircon. Yellow circles and numbers indicate quantitative analysis points.	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
667	04-1	Ti-100(Fe+Cr+V)-1000(W) diagram of rutiles from Gubong, Samgwang, Unsan, and variablely metamorphosed mesothermal gold deposits (after Clark and Williams-Jones, 2004; Meinhold, 2010; Yoo, 2020a). Also are shown the Tropicana Au deposit and Big Bell Au deposit (McInnes et al., 2015).	미상	EPMA	Ti-100(Fe+Cr+V)-1000(W) diagram of rutiles from Gubong, Samgwang, Unsan, and variablely metamorphosed mesothermal gold deposits (after Clark and Williams-Jones, 2004; Meinhold, 2010; Yoo, 2020a). Also are shown the Tropicana Au deposit and Big Bell Au deposit (McInnes et al., 2015).	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
668	04-1	Trivalent vs. pentavalent and hexavalent ions in rutiles from Gubong, Samgwang, Unsan, and variablely metamorphosed mesothermal gold deposits (after Scott and Radford, 2007).	미상	EPMA	Trivalent vs. pentavalent and hexavalent ions in rutiles from Gubong, Samgwang, Unsan, and variablely metamorphosed mesothermal gold deposits (after Scott and Radford, 2007).	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
669	04-1	The description of No. 04-1 drilling core at the Gubong Au-Ag deposit area	미상	EPMA	The description of No. 04-1 drilling core at the Gubong Au-Ag deposit area	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
670	04-1	Chemical composition of Ti-bearing minerals from No. 04-1 drilling core samples at the Gubong Au-Ag deposit area.	미상	EPMA	Chemical composition of Ti-bearing minerals from No. 04-1 drilling core samples at the Gubong Au-Ag deposit area.	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
671	04-1	Correlation coefficients among elements of rutile from a depth -275 ML (No. 04-1 drilling core) at the Gubong Au-Ag deposit area	미상	EPMA	Correlation coefficients among elements of rutile from a depth -275 ML (No. 04-1 drilling core) at the Gubong Au-Ag deposit area	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
672	04-1	Correlation coefficients among elements of rutile found at a depth of -779 ML (No. 04-1 drilling core) at the Gubong Au-Ag deposit area.	미상	EPMA	Correlation coefficients among elements of rutile found at a depth of -779 ML (No. 04-1 drilling core) at the Gubong Au-Ag deposit area.	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 함티타늄 광물들의 산상과 화학 조성(광물과암석 MinPet_v36n3p187)	36.405556 126.758889
673	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Geological map of the Hongseong mine area (Eum and Lee, 1963; Lee and Kim, 1963). Circle indicates the study area.	미상	SEM, XRD, EPMA, PLM	Geological map of the Hongseong mine area (Eum and Lee, 1963; Lee and Kim, 1963). Circle indicates the study area.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222; 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
674	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Geological map of the Bibong mine area (Eum and Lee, 1963; Lee and Kim, 1963). Circle indicates the study area.	미상	SEM, XRD, EPMA, PLM	Geological map of the Bibong mine area (Eum and Lee, 1963; Lee and Kim, 1963). Circle indicates the study area.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222; 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
675	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Sample localities of the Hongseong mine area. Thin line means a distribution area of the serpentinite mass.	미상	SEM, XRD, EPMA, PLM	Sample localities of the Hongseong mine area. Thin line means a distribution area of the serpentinite mass.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222; 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
676	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Sample localities of the Bibong mine area. Thin line means a distribution area of the serpentinite mass.	미상	SEM, XRD, EPMA, PLM	Sample localities of the Bibong mine area. Thin line means a distribution area of the serpentinite mass.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222; 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
677	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative photographs of rocks and soils for the Hongseong mine area. A) evidences of inflows by hydrothermal waters following the crack, B) fine veins by inflow of hydrothermal waters, C), D) asbestos occurring as slip fiber type, E) asbestos occurring as cross fiber type, F) asbestos aggregates within the soils, G) fibrous asbestos crystals and boulder stones within the soils. H) serpentinite fragments and fibrous asbestos crystals.	미상	SEM, XRD, EPMA, PLM	Representative photographs of rocks and soils for the Hongseong mine area. A) evidences of inflows by hydrothermal waters following the crack, B) fine veins by inflow of hydrothermal waters, C), D) asbestos occurring as slip fiber type, E) asbestos occurring as cross fiber type, F) asbestos aggregates within the soils, G) fibrous asbestos crystals and boulder stones within the soils. H) serpentinite fragments and fibrous asbestos crystals.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
678	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative photographs for the Bibong mine area. A) distant view of the Bibong mine, B) reservoir nearby the mine, C) weathered serpentinitized rock at the entrance of the mine, D) gneiss rock (right) bordering sepertinited rock (left), E) sepertinited rock showing black green, (F) restored outcrops. In the C), the arrow shows a slicken side.	미상	SEM, XRD, EPMA, PLM	Representative photographs for the Bibong mine area. A) distant view of the Bibong mine, B) reservoir nearby the mine, C) weathered serpentinitized rock at the entrance of the mine, D) gneiss rock (right) bordering sepertinited rock (left), E) sepertinited rock showing black green, (F) restored outcrops. In the C), the arrow shows a slicken side.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
679	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative photographs of rocks and soils for the Bibong mine area. A), B) asbestos occurring as cross fiber type, C), D) asbestos occurring as slip fiber type, E) asbestos occurring as mass fiber type, F) zonation showing from core, serpentine, amphibole to rim, vermiculate.	미상	SEM, XRD, EPMA, PLM	Representative photographs of rocks and soils for the Bibong mine area. A), B) asbestos occurring as cross fiber type, C), D) asbestos occurring as slip fiber type, E) asbestos occurring as mass fiber type, F) zonation showing from core, serpentine, amphibole to rim, vermiculate.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
680	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative photomicrographs of rocks for the Hongseong mine area. A) serpentinite, B) serpentinite showing equigranular-mosaic texture B), C) proto-granular orthopyroxene surrounding by olivine and serpentine, D) fibrous tremolite, E) amphibolite showing fibrous texture, F) amphibolite showing lineation, G)amphibolite containing tremolite asbestos, H) gneiss showing gneissosity. SP for serpentine, MT for magnetite, OL for olivine, OPX for orthopyroxene, AM for amphibole, TR for tremolite, BI for biotite and QZ for quartz, Wide(mm) is 2 mm.	미상	SEM, XRD, EPMA, PLM	Representative photomicrographs of rocks for the Hongseong mine area. A) serpentinite, B) serpentinite showing equigranular-mosaic texture B), C) proto-granular orthopyroxene surrounding by olivine and serpentine, D) fibrous tremolite, E) amphibolite showing fibrous texture, F) amphibolite showing lineation, G)amphibolite containing tremolite asbestos, H) gneiss showing gneissosity. SP for serpentine, MT for magnetite, OL for olivine, OPX for orthopyroxene, AM for amphibole, TR for tremolite, BI for biotite and QZ	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
681	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative photomicrographs of rocks for the Bibong mine area. A) serpentinite containing serpentine and magnetite, B) serpentinite showing remnant olivine grains, C) protogranular orthopyroxene and serpentine, D) fibrous tremolite, E) basic dyke, F) gneiss. SP for serpentine, MT for magnetite. OL for olivine, PL for plagioclase, OPX for orthopyroxene, TR for tremolite, CPX for clinopyroxene, BI for biotite and QZ for quartz, Wide (mm) is 2 mm.	미상	SEM, XRD, EPMA, PLM	Representative photomicrographs of rocks for the Bibong mine area. A) serpentinite containing serpentine and magnetite, B) serpentinite showing remnant olivine grains, C) protogranular orthopyroxene and serpentine, D) fibrous tremolite, E) basic dyke, F) gneiss. SP for serpentine, MT for magnetite. OL for olivine, PL for plagioclase, OPX for orthopyroxene, TR for tremolite, CPX for clinopyroxene, BI for biotite and QZ for quartz, Wide	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
682	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative PLM analyses of chrysotiles from the Hongseong mine area.	미상	SEM, XRD, EPMA, PLM	Representative PLM analyses of chrysotiles from the Hongseong mine area.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
683	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative XRD analyses of asbestos from the Hongseong mine area. Ch for chrysotile, Tr for tremolite, Act for actinolite.	미상	SEM, XRD, EPMA, PLM	Representative XRD analyses of asbestos from the Hongseong mine area. Ch for chrysotile, Tr for tremolite, Act for actinolite.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
684	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative XRD analyses of asbestos from the Bibong mine area. Ch for chrysotile, Tr for tremolite, Act for actinolite.	미상	SEM, XRD, EPMA, PLM	Representative XRD analyses of asbestos from the Bibong mine area. Ch for chrysotile, Tr for tremolite, Act for actinolite.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
685	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative SEM analyses of asbestos from the Hongseong mine area.	미상	SEM, XRD, EPMA, PLM	Representative SEM analyses of asbestos from the Hongseong mine area.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
686	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative SEM analyses of asbestos from the Bibong mine area.	미상	SEM, XRD, EPMA, PLM	Representative SEM analyses of asbestos from the Bibong mine area.	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
687	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Sample localities of the Hongseong and Bibong mine areas	미상	SEM, XRD, EPMA, PLM	Sample localities of the Hongseong and Bibong mine areas	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
688	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative analyses of the serpentines from the Hongseong mine area	미상	SEM, XRD, EPMA, PLM	Representative analyses of the serpentines from the Hongseong mine area	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
689	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative analyses of the serpentines from the Bibong mine area	미상	SEM, XRD, EPMA, PLM	Representative analyses of the serpentines from the Bibong mine area	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
690	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative analyses of the amphiboles from the Hongseong mine area	미상	SEM, XRD, EPMA, PLM	Representative analyses of the amphiboles from the Hongseong mine area	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
691	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	Representative analyses of the amphiboles from the Bibong mine area	미상	SEM, XRD, EPMA, PLM	Representative analyses of the amphiboles from the Bibong mine area	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
692	HS01/02/09/12/16/17/19/35, BI02/13/16/30/36/40	A summary of the analytical results for the Hongseong and Bibong mine areas	미상	SEM, XRD, EPMA, PLM	A summary of the analytical results for the Hongseong and Bibong mine areas	충남 서부 사문석 광산 인근에서의 석면 산출 특성: 홍성 및 비봉광산을 중심으로 (광물과암석 MinPet_v36n4p233)	36.573056 126.627222; 36.573056 126.662222; 36.555278 126.662222; 36.555278 126.627222 36.541111 126.732222; 36.541111 126.856667; 36.460278 126.856667; 36.460278 126.732222
693	23YG-1~14	Geological map of South Korea including location of the study area at Yugu (modified from Choi et al., 2005). The inset shows tectonic map of Northeast Asia; NM (Nangrim Massif), IB (Imjingang Belt), GM (Gyeonggi Massif), TB (Taebaeksan Basin), OB (Okcheon Belt), and YM (Yeongnam Massif) (modified from Park and Jung, 2017)	미상	XRF, EPMA, ICP-MS	Geological map of South Korea including location of the study area at Yugu (modified from Choi et al., 2005). The inset shows tectonic map of Northeast Asia; NM (Nangrim Massif), IB (Imjingang Belt), GM (Gyeonggi Massif), TB (Taebaeksan Basin), OB (Okcheon Belt), and YM (Yeongnam Massif) (modified from Park and Jung, 2017)	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
694	23YG-1~14	Geological map of the Yugu area in the southwestern Gyeonggi Massif, South Korea, showing sampling locations and Ni contents from whole rock chemistry (modified from Woo et al., 2001).	미상	XRF, EPMA, ICP-MS	Geological map of the Yugu area in the southwestern Gyeonggi Massif, South Korea, showing sampling locations and Ni contents from whole rock chemistry (modified from Woo et al., 2001).	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
695	23YG-1~14	(a) Modal composition based on the proportions of olivine, orthopyroxene and clinopyroxene in the Yugu peridotite. (b) Ternary classification diagram of the orthopyroxene and clinopyroxene in the Yugu peridotite.	미상	XRF, EPMA, ICP-MS	(a) Modal composition based on the proportions of olivine, orthopyroxene and clinopyroxene in the Yugu peridotite. (b) Ternary classification diagram of the orthopyroxene and clinopyroxene in the Yugu peridotite.	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
696	23YG-1~14	Optical photomicrographs of the Yugu peridotites. (a)-(b) Equigranular dunite weakly serpentinized along olivine grain boundaries and subgrain boundaries in sample 23YG-8. (c)-(d) More serpentinized dunite with serpentine and magnetite layers in sample 23YG-5. (e)-(f) Strongly serpentinized peridotites with magnetite layer in sample 23YG-1. (g)-(h) Orthopyroxene and clinopyroxene porphyroclasts in peridotite 23YG-4. The recrystallized olivine grains remained in the matrix. Ol, olivine; Srp, serpentine; Opx, orthopyroxene; Cpx, clinopyroxene; Mt, magnetite. The line (S) at the bottom left represents the foliation in (c)-(f).	미상	XRF, EPMA, ICP-MS	Optical photomicrographs of the Yugu peridotites. (a)-(b) Equigranular dunite weakly serpentinized along olivine grain boundaries and subgrain boundaries in sample 23YG-8. (c)-(d) More serpentinized dunite with serpentine and magnetite layers in sample 23YG-5. (e)-(f) Strongly serpentinized peridotites with magnetite layer in sample 23YG-1. (g)-(h) Orthopyroxene and clinopyroxene porphyroclasts in peridotite 23YG-4. The recrystallized olivine grains remained in the matrix. Ol, olivine; Srp, serpentine; Opx, orthopyroxene; Cpx, clinopyroxene; Mt, magnetite. The line (S) at the bottom left represents the foliation in (c)-(f).	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
697	23YG-1~14	Back-scattered electron (BSE) images and reflected light photomicrographs of sulfide minerals. (a) Relatively fresh pentlandite (Pn). (b)-(d) Internally altered sulfide minerals including millerite (Ml) and awaruite (Aw).	미상	XRF, EPMA, ICP-MS	Back-scattered electron (BSE) images and reflected light photomicrographs of sulfide minerals. (a) Relatively fresh pentlandite (Pn). (b)-(d) Internally altered sulfide minerals including millerite (Ml) and awaruite (Aw).	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
698	23YG-1~14	(a) Relationships between Al ₂ O ₃ (wt.%) and SiO ₂ /MgO (Bodinier and Godard, 2003). All Yugu ultramafic rocks plot within the peridotite field. (b) Relationships between Al ₂ O ₃ and MgO (wt.%) (Whattam et al., 2011). The Yugu samples plot within European SCLM peridotites or abyssal peridotites.	미상	XRF, EPMA, ICP-MS	(a) Relationships between Al ₂ O ₃ (wt.%) and SiO ₂ /MgO (Bodinier and Godard, 2003). All Yugu ultramafic rocks plot within the peridotite field. (b) Relationships between Al ₂ O ₃ and MgO (wt.%) (Whattam et al., 2011). The Yugu samples plot within European SCLM peridotites or abyssal peridotites.	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
699	23YG-1~14	Relationships between the Fo # of olivines and Cr # of spinels in the Yugu peridotites. OSMA, olivine-spinel mantle array as a spinel peridotite residual trend (Arai, 1994). FMM represents the fertile MORB mantle. Previous datas for the Yugu peridotites (Arai et al., 2008) is shown for comparison. Yugu samples plot within abyssal peridotite area.	미상	XRF, EPMA, ICP-MS	Relationships between the Fo # of olivines and Cr # of spinels in the Yugu peridotites. OSMA, olivine-spinel mantle array as a spinel peridotite residual trend (Arai, 1994). FMM represents the fertile MORB mantle. Previous datas for the Yugu peridotites (Arai et al., 2008) is shown for comparison. Yugu samples plot within	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
700	23YG-1~14	(a) Estimate of melting extents of the Yugu peridotites (Khedr et al., 2014). (b) Geochemical records of interactions between melt/fluid and residues of the Yugu peridotites (Deschamps et al., 2013).	미상	XRF, EPMA, ICP-MS	(a) Estimate of melting extents of the Yugu peridotites (Khedr et al., 2014). (b) Geochemical records of interactions between melt/fluid and residues of the Yugu peridotites (Deschamps et al.,	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
701	23YG-1~14	Chondrite-normalized REE pattern for the Yugu peridotites (Sun and McDonough, 1989).	미상	XRF, EPMA, ICP-MS	Chondrite-normalized REE pattern for the Yugu peridotites (Sun and McDonough, 1989).	충남 유구지역 초염기성암의 성인과 니켈 잠재성에 대한 예비연구(광물과암석 MinPet_v36n4p323)	36.640000 126.966111; 36.640000 126.997222; 36.605000 126.997222; 36.605000 126.966111
702	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	Geologic map of the study area modified after Park et al. (1997) and Hwang and Kihm et al. (2007), and sampling locations.	미상	fusion ICP, fusion MS	Geologic map of the study area modified after Park et al. (1997) and Hwang and Kihm et al. (2007), and sampling locations.	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222
703	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	The classification of the granitoids in the study area using Na ₂ O + K ₂ O vs. SiO ₂ diagram(Middlemost, 1994). The porphyritic biotite granite is plotted in quartz monzogranite field, whereas two-mica granite, garnet-bearing two-mica granite, and mica-granite are plotted in the granite area, respectively.	미상	fusion ICP, fusion MS	The classification of the granitoids in the study area using Na ₂ O + K ₂ O vs. SiO ₂ diagram(Middlemost, 1994). The porphyritic biotite granite is plotted in quartz monzogranite field, whereas two-mica granite, garnet-bearing two-mica granite, and mica-granite are plotted in the granite area, respectively.	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222
704	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	Harker variation diagrams of major elements for the Jurassic granitic rocks in the study area.	미상	fusion ICP, fusion MS	Harker variation diagrams of major elements for the Jurassic granitic rocks in the study area.	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
705	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	(a) AFM diagram illustrating the calc-alkaline trend for the Jurassic granitoids in the study area. The boundary between tholeiitic series and calc-alkaline series is after Irvine and Baragar (1971). (b) K2O vs SiO2 diagram. The boundary lines are from Le Maitre et al. (1989). (c) Al2O3/(Na2O+K2O+CaO) vs. Al2O3/(Na2O+K2O) diagram (after Maniar and Piccoli, 1989). The Jurassic granitoids in the study area are all plotted in the peraluminous field. Porphyritic biotite granite shows different characteristics in molar Al2O3/(Na2O+K2O) ratio from other granitoids in the study area. (d) Classification of the Jurassic granitoids after Tarney and Jones (1994), and porphyritic biotite granite is plotted in the high Ba-Sr granite field, whereas other granitoids are plotted in the low Ba-Sr granite field.	미상	fusion ICP, fusion MS	(a) AFM diagram illustrating the calc-alkaline trend for the Jurassic granitoids in the study area. The boundary between tholeiitic series and calc-alkaline series is after Irvine and Baragar (1971). (b) K2O vs SiO2 diagram. The boundary lines are from Le Maitre et al. (1989). (c) Al2O3/(Na2O+K2O+CaO) vs. Al2O3/(Na2O+K2O) diagram (after Maniar and Piccoli, 1989). The Jurassic granitoids in the study area are all plotted in the peraluminous field. Porphyritic biotite granite shows different characteristics in molar Al2O3/(Na2O+K2O) ratio from other granitoids in the study area. (d) Classification of the Jurassic granitoids after Tarney and Jones (1994), and porphyritic biotite granite is plotted in the high Ba-Sr granite field, whereas other granitoids are plotted in the low	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222
706	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	(a) Chondrite-normalized REE patterns for the Jurassic granitoids in the study area normalized to the composition of the chondrite by Taylor and McLennan, 1985. (b) Primordial mantle-normalized spider diagram of the Jurassic granitoids in the study area (Wood et al., 1979, 1981).	미상	fusion ICP, fusion MS	(a) Chondrite-normalized REE patterns for the Jurassic granitoids in the study area normalized to the composition of the chondrite by Taylor and McLennan, 1985. (b) Primordial mantle-normalized spider diagram of the Jurassic granitoids in the study area (Wood et al., 1979,	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222
707	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	(a) Rb/Sr vs Rb/Ba diagram (Sylvester, 1998; Zhao et al., 2016), (b) Al2O3/TiO2 vs. CaO/Na2O diagram (Sylvester, 1998; Jung and Pfander, 2007; Zhao et al., 2016).	미상	fusion ICP, fusion MS	(a) Rb/Sr vs Rb/Ba diagram (Sylvester, 1998; Zhao et al., 2016), (b) Al2O3/TiO2 vs. CaO/Na2O diagram (Sylvester, 1998; Jung and Pfander, 2007; Zhao et al., 2016).	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222
708	JA1, DP4, KD4, MW1-1, KN1/3, WS1, JD1, MH3, SC1/4/12	Concentrations of major, trace, and rare earth elements of the granitic rocks in the area of Mt. Gwangdeoksan in northern Gyeonggi Massif	미상	fusion ICP, fusion MS	Concentrations of major, trace, and rare earth elements of the granitic rocks in the area of Mt. Gwangdeoksan in northern Gyeonggi Massif	경기육괴 북부 광덕산 일대에 분포하는 쥐라기 고알루미나 화강암질암의 성인에 대한 지화학적 연구(광물과암석 MinPet_v33n4p325)	38.253889 127.277222; 38.253889 127.610556; 38.033611 127.610556; 38.033611 127.277222
709	YD16/17	(a) Simplified tectonic provinces of the Korean Peninsula (Kee et al., 2020); (b) Geological map of the Gapyeong area (Kim et al., 1979; Yengkhom et al., 2014). Yellow stars represent the sample location.	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	(a) Simplified tectonic provinces of the Korean Peninsula (Kee et al., 2020); (b) Geological map of the Gapyeong area (Kim et al., 1979; Yengkhom et al., 2014). Yellow stars represent the sample location.	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석 MinPet_v35n3p215)	37.780440 127.665033 37.780944 127.645846
710	YD16/17	Representative cathodoluminescence images of zircons from (a) YD16 and (b) YD17, respectively.	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	Representative cathodoluminescence images of zircons from (a) YD16 and (b) YD17, respectively.	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석)	37.780440 127.665033 37.780944 127.645846

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711	YD16/17	(a-b) Th and U concentrations of the zircon domains analyzed by SHRIMP and MC-LA-ICP-MS.	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	(a-b) Th and U concentrations of the zircon domains analyzed by SHRIMP and MC-LA-ICP-MS.	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석	37.780440 127.665033 37.780944 127.645846
712	YD16/17	The results of zircon U-Pb analysis for YD16. (a) Tera-Wasserburg concordia plot for zircon U-Pb data analyzed by the SHRIMP; (b) Zircon U-Pb age distribution patterns; (c) Tera-Wasserburg concordia plot for zircon U-Pb data from zircon rims; (d) Tera-Wasserburg concordia plot for zircon rim U-Pb data analyzed by the MC-LA-ICP-MS.	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	The results of zircon U-Pb analysis for YD16. (a) Tera-Wasserburg concordia plot for zircon U-Pb data analyzed by the SHRIMP; (b) Zircon U-Pb age distribution patterns; (c) Tera-Wasserburg concordia plot for zircon U-Pb data from zircon rims; (d) Tera-Wasserburg concordia plot for zircon rim U-Pb data analyzed by the MC-LA-	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석 MinPet_v35n3p215)	37.780440 127.665033 37.780944 127.645846
713	YD16/17	The results of zircon U-Pb analysis for YD17. (a) Tera-Wasserburg concordia plot for zircon U-Pb data analyzed by the SHRIMP; (b) Zircon U-Pb age distribution patterns; (c) Tera-Wasserburg concordia plot for zircon U-Pb data from zircon rims; (d) Tera-Wasserburg concordia plot for zircon rim U-Pb data analyzed by the MC-LA-ICP-MS.	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	The results of zircon U-Pb analysis for YD17. (a) Tera-Wasserburg concordia plot for zircon U-Pb data analyzed by the SHRIMP; (b) Zircon U-Pb age distribution patterns; (c) Tera-Wasserburg concordia plot for zircon U-Pb data from zircon rims; (d) Tera-Wasserburg concordia plot for zircon rim U-Pb data analyzed by the MC-LA-	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석 MinPet_v35n3p215)	37.780440 127.665033 37.780944 127.645846
714	YD16/17	(a-b) Chondrite-normalized rare earth element plots of zircons analyzed samples; (c) box and whisker diagram plot for Ti-in-zircon temperature.	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	(a-b) Chondrite-normalized rare earth element plots of zircons analyzed samples; (c) box and whisker diagram plot for Ti-in-zircon temperature.	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석	37.780440 127.665033 37.780944 127.645846
715	YD16/17	The SHRIMP zircon age data of banded gneiss in the Euiam Gneiss Complex, central Gyeonggi Massif	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	The SHRIMP zircon age data of banded gneiss in the Euiam Gneiss Complex, central Gyeonggi Massif	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석	37.780440 127.665033 37.780944 127.645846
716	YD16/17	The MC-LA-IPC-MS zircon age data of banded gneiss in the Euiam Gneiss Complex, central Gyeonggi Massif	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	The MC-LA-IPC-MS zircon age data of banded gneiss in the Euiam Gneiss Complex, central Gyeonggi Massif	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석	37.780440 127.665033 37.780944 127.645846
717	YD16/17	Trace element composition of zircon from banded gneiss in the Euiam Gneiss Complex, central Gyeonggi Massif	SQUID(ver. 2.5), Isoplot(ver. 3.75), ICPMSDataCal	SHRIMP, SEM, MS-ICPMS	Trace element composition of zircon from banded gneiss in the Euiam Gneiss Complex, central Gyeonggi Massif	경기육괴 중부 의암 편마암 복합체 호상 편마암의 저어콘 U-Pb 연령과 미량원소: 경기육괴 기반암의 퇴적 시기와 변성작용에 대한 고찰(광물과암석	37.780440 127.665033 37.780944 127.645846
718	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	Location (a) and geological map (b) of the study area (modified from Cho and Lee, 2017; Lee et al., 2019).	미상	EPMA, XRD, XRF	Location (a) and geological map (b) of the study area (modified from Cho and Lee, 2017; Lee et al., 2019).	용유도 울왕산 자연기원 불소의 부화기작 규명: 단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611

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719	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	The analytical results of X-ray diffractometer (XRD) for the rocks obtained from the Eulwangsan fault zone. (a) the analytical results show the peaks of quartz, plagioclase, alkali feldspar, biotite, chlorite, and sericite; (b) the fluorite peaks overlapped with those of alkali feldspar. Samples containing fluorite showed its shoulder, but they without fluorite did not.	미상	EPMA, XRD, XRF	The analytical results of X-ray diffractometer (XRD) for the rocks obtained from the Eulwangsan fault zone. (a) the analytical results show the peaks of quartz, plagioclase, alkali feldspar, biotite, chlorite, and sericite; (b) the fluorite peaks overlapped with those of alkali feldspar. Samples containing fluorite showed its shoulder, but they without fluorite did not.	용유도 올왕산 자연기원 불소의 부화기작 규명:단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611
720	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	The observation results of polarized microscope for the rocks obtained from the Eulwangsan fault zone. (a, b) biotite and chlorite filling pore spaces between sericite generated due to the alteration of plagioclase and alkali feldspar and other minerals (sample F005); (c, d) veinlet-type fluorite accompanying with quartz and filling the pore spaces between minerals (sample F040). Qz=quartz; Pl=plagioclase; Kfs=K-feldspar; Ser=sericite; Bt=biotite; Chl=chlorite; Fl=fluorite.	미상	EPMA, XRD, XRF	The observation results of polarized microscope for the rocks obtained from the Eulwangsan fault zone. (a, b) biotite and chlorite filling pore spaces between sericite generated due to the alteration of plagioclase and alkali feldspar and other minerals (sample F005); (c, d) veinlet-type fluorite accompanying with quartz and filling the pore spaces between minerals (sample F040). Qz=quartz; Pl=plagioclase; Kfs=K-feldspar; Ser=sericite; Bt=biotite;	용유도 올왕산 자연기원 불소의 부화기작 규명:단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611
721	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	Standard samples and detection limits of each element for the analyses of electron probe micro-analyzer (EPMA)	미상	EPMA, XRD, XRF	Standard samples and detection limits of each element for the analyses of electron probe micro-analyzer (EPMA)	용유도 올왕산 자연기원 불소의 부화기작 규명:단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611
722	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	The average fluorine concentrations of X-ray fluorescence spectrometer (XRF) for the rocks of the Eulwangsan fault zone	미상	EPMA, XRD, XRF	The average fluorine concentrations of X-ray fluorescence spectrometer (XRF) for the rocks of the Eulwangsan fault zone	용유도 올왕산 자연기원 불소의 부화기작 규명:단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611
723	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	The analytical results of quantitative X-ray diffractometer (XRD) for the rocks of the Eulwangsan fault zone (%)	미상	EPMA, XRD, XRF	The analytical results of quantitative X-ray diffractometer (XRD) for the rocks of the Eulwangsan fault zone (%)	용유도 올왕산 자연기원 불소의 부화기작 규명:단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611
724	F1/005/010/015/020/025/030/035/040/045/050/055/060/065/070/075/080/085/090/095/100/2	The average fluorine concentrations of electron probe micro-analyzer (EPMA) for the F-bearing minerals of the Eulwangsan fault zone (wt%)	미상	EPMA, XRD, XRF	The average fluorine concentrations of electron probe micro-analyzer (EPMA) for the F-bearing minerals of the Eulwangsan fault zone (wt%)	용유도 올왕산 자연기원 불소의 부화기작 규명:단층대 연구를 중심으로(광물과암석 MinPet_v35n3p377)	37.513056 126.338611; 37.513056 126.522778; 37.407500 126.522778; 37.407500 126.338611

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
725	04-1	Generalized geological map of the Gubong Au-Ag deposit area, showing the orientation of the principal quartz veins (1 = Danbong vein, 2 = Yongma vein, 3 = Ganjuk vein, 4 = No. 6 vein, 5 = No. 1 vein, 6 = Bongam2 vein, 7 = Bongam1 vein, 8 = Gunryang vein) (Modified after Yoo et al., 2002; 2006; Yoo, 2023).	미상	EPMA	Generalized geological map of the Gubong Au-Ag deposit area, showing the orientation of the principal quartz veins (1 = Danbong vein, 2 = Yongma vein, 3 = Ganjuk vein, 4 = No. 6 vein, 5 = No. 1 vein, 6 = Bongam2 vein, 7 = Bongam1 vein, 8 = Gunryang vein) (Modified after Yoo et al., 2002; 2006;	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889
726	04-1	Photographs, microphotographs and BSEs of minerals representative for a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Yoo, 2023). (a)-(b) photographs of polishing thin section for a depth of -275 ML and -779 ML samples, (c)-(d) microphotographs of chlorite, white mica, quartz and calcite in quartz vein and alteration zone found at a depth of -275 ML and -779 ML samples, (e)-(f) BSEs of chlorite, white mica, K-feldspar, rutile, quartz and calcite in alteration zone found at a depth of -275 ML sample, (g)-(i) BSEs of chlorite, white mica, apatite, zircon, rutile, ilmenite, pyrrhotite, quartz and calcite in alteration zone and quartz vein found at a depth of -779 ML sample with chlorite crystals showing different phases (dark chlorite and light chlorite). Abbreviations; Ap = apatite, Cal = calcite, Chl = chlorite, Ilm = ilmenite, Kfs = K-feldspar, Po = pyrrhotite, Py = pyrite, Qz = quartz, Rt = rutile, WM = white mica, Zrn = zircon. Yellow circles and numbers indicate quantitative analysis points.	미상	EPMA	Photographs, microphotographs and BSEs of minerals representative for a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Yoo, 2023). (a)-(b) photographs of polishing thin section for a depth of -275 ML and -779 ML samples, (c)-(d) microphotographs of chlorite, white mica, quartz and calcite in quartz vein and alteration zone found at a depth of -275 ML and -779 ML samples, (e)-(f) BSEs of chlorite, white mica, K-feldspar, rutile, quartz and calcite in alteration zone found at a depth of -275 ML sample, (g)-(i) BSEs of chlorite, white mica, apatite, zircon, rutile, ilmenite, pyrrhotite, quartz and calcite in alteration zone and quartz vein found at a depth of -779 ML sample with chlorite crystals showing different phases (dark chlorite and light chlorite). Abbreviations; Ap = apatite, Cal = calcite, Chl = chlorite, Ilm = ilmenite, Kfs = K-feldspar, Po = pyrrhotite, Py = pyrite, Qz = quartz, Rt = rutile, WM = white mica, Zrn = zircon. Yellow circles	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889
727	04-1	Compositional diagram for chlorites found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Yoo, 2021). a) Al+□ -Mg-Fe ternary diagram (Modified after Zane and Weiss, 1998; Yavuz et al., 2015), (b) VIR3+ (apfu) vs. Mg/ (Mg+Fetot) diagram (Modified after Plissart et al., 2009; Yavuz et al., 2015). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and Brathwaite, 2003).	미상	EPMA	Compositional diagram for chlorites found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Yoo, 2021). a) Al+□ -Mg-Fe ternary diagram (Modified after Zane and Weiss, 1998; Yavuz et al., 2015), (b) VIR3+ (apfu) vs. Mg/ (Mg+Fetot) diagram (Modified after Plissart et al., 2009; Yavuz et al., 2015). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
728	04-1	Compositional variation in chlorite found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Yoo, 2021). (a) Si (apfu) vs. AlVI/(sum oct) diagram (Modified after Cohen, 2011), (b) Si (apfu) vs. Fe/(Fe+Mg+Mn) diagram (Modified after Cohen, 2011). Dashed lines represent chlorite species divisions according to Foster (1962). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and Brathwaite, 2003).	미상	EPMA	Compositional variation in chlorite found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Yoo, 2021). (a) Si (apfu) vs. AlVI/(sum oct) diagram (Modified after Cohen, 2011), (b) Si (apfu) vs. Fe/(Fe+Mg+Mn) diagram (Modified after Cohen, 2011). Dashed lines represent chlorite species divisions according to Foster (1962). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and Brathwaite, 2003).	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889
729	04-1	Mica varieties in terms of Mg-Li vs. Fe+Mn+Ti-Alvi (Modified after Tischendorf et al, 1997).	미상	EPMA	Mica varieties in terms of Mg-Li vs. Fe+Mn+Ti-Alvi (Modified after Tischendorf et al, 1997).	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석)	36.405556 126.758889
730	04-1	Compositional variations of white micas found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Craw and MacKenzie, 2016; Yoo, 2020; 2021). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020), Reefton goldfields (Christie and Brathwaite, 2003) and Macraes deposit (Craw and MacKenzie, 2016).	미상	EPMA	Compositional variations of white micas found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area (Modified after Craw and MacKenzie, 2016; Yoo, 2020; 2021). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020), Reefton goldfields (Christie and Brathwaite, 2003) and Macraes deposit (Craw and MacKenzie, 2016).	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889
731	04-1	Compositional variation in white mica in terms of total Si (apfu) vs. Fe+Mg (apfu) (Modified after Christie and Brathwaite, 2003; Yoo, 2020; 2021). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and Brathwaite, 2003).	미상	EPMA	Compositional variation in white mica in terms of total Si (apfu) vs. Fe+Mg (apfu) (Modified after Christie and Brathwaite, 2003; Yoo, 2020; 2021). Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889
732	04-1	Compositional variation in white mica found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area. (a) total Al (apfu) vs. Fe+Mg+ Mn (apfu), (b) total Al (apfu) vs. K+Na+2Ca (apfu), (c) total Al (apfu) vs. K/(K+Na+2Ca) (apfu) (Modified after Cohen, 2011; Yoo, 2020; 2021). Arrows represent compositional vectors for main substitution mechanisms and black open symbols represent end-member compositions. Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and Brathwaite, 2003).	미상	EPMA	Compositional variation in white mica found a depth of -275 ML and -779 ML samples (No. 04-1 drilling core) of the Gubong Au-Ag deposit area. (a) total Al (apfu) vs. Fe+Mg+ Mn (apfu), (b) total Al (apfu) vs. K+Na+2Ca (apfu), (c) total Al (apfu) vs. K/(K+Na+2Ca) (apfu) (Modified after Cohen, 2011; Yoo, 2020; 2021). Arrows represent compositional vectors for main substitution mechanisms and black open symbols represent end-member compositions. Also are shown the Unsan deposit (Yoo, 2021), Samgwang deposit (Yoo, 2020) and Reefton goldfields (Christie and	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
733	04-1	The description of ore vein, quartz vein and mineralized zone identified in No. 04-1 drilling core at the Gubong Au-Ag deposit area (Yoo, 2023)	미상	EPMA	The description of ore vein, quartz vein and mineralized zone identified in No. 04-1 drilling core at the Gubong Au-Ag deposit area (Yoo, 2023)	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석 MinPet_v36n4p273)	36.405556 126.758889
734	04-1	Chemical composition of chlorite from No. 04-1 drilling core sample at the Gubong Au-Ag deposit area	미상	EPMA	Chemical composition of chlorite from No. 04-1 drilling core sample at the Gubong Au-Ag deposit area	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석)	36.405556 126.758889
735	04-1	Chemical composition of white mica from No.04-1 drilling core sample at the Gubong Au-Ag deposit area	미상	EPMA	Chemical composition of white mica from No.04-1 drilling core sample at the Gubong Au-Ag deposit area	구봉 금-은 광상일대 시추코아(04-1)에서 산출되는 녹니석과 백색운모의 산상 및 화학조성(광물과암석)	36.405556 126.758889
736	93330-1/38/45, 9341-32/34	(a) Tectonic map showing the Imjingang belt and various tectonic units of China, (b) Schematic geologic map showing the outline of the Imjingang belt. Compiled from tectonic map of Korea (Um and Chun, 1984; Russian Academy of Science, 1992), Yamaguchi (1951), Li (1993) and our unpublished data.	미상	EPMA	(a) Tectonic map showing the Imjingang belt and various tectonic units of China, (b) Schematic geologic map showing the outline of the Imjingang belt. Compiled from tectonic map of Korea (Um and Chun, 1984; Russian Academy of Science, 1992), Yamaguchi (1951), Li (1993) and our unpublished data.	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 PetroI_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
737	93330-1/38/45, 9341-32/34	Geologic map of the Yeoncheon Group adopted from Yamaguchi (1951). Type localities for the Anhyop, Puap, and Saknyong Series of the Imjin System are also shown. Note that the Sangwon Supergroup of Yamaguchi (1951) corresponds to the Puap Series, and other Formations except for the Samgot Formation to the Saknyong Series of Li (1993).	미상	EPMA	Geologic map of the Yeoncheon Group adopted from Yamaguchi (1951). Type localities for the Anhyop, Puap, and Saknyong Series of the Imjin System are also shown. Note that the Sangwon Supergroup of Yamaguchi (1951) corresponds to the Puap Series, and other Formations except for the Samgot Formation to the Saknyong Series of Li (1993).	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 PetroI_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
738	93330-1/38/45, 9341-32/34	Schematic geologic map of the Yeoncheon-Cheongok area. Geologic boundaries are only approximate. Numbers refer to the analyzed samples. Sample sites without strike and dip measurements are shown by open circles. Thin lines with numbers designate national roads.	미상	EPMA	Schematic geologic map of the Yeoncheon-Cheongok area. Geologic boundaries are only approximate. Numbers refer to the analyzed samples. Sample sites without strike and dip measurements are shown by open circles. Thin lines with numbers designate national roads.	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 PetroI_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
739	93330-1/38/45, 9341-32/34	AlVI vs. AlIV plot of the analyzed amphiboles. Two reference lines represent the pargasitic (Pa) and tschermakitic (Ts) substitutions, respectively. Note that the Pa substitution is identical to the sum of edenitic (Ed) and Ts substitutions. Compositions of amphiboles in the Samgot Formation vary less than those in the Chuncheon amphibolite (Lee and Cho, 1995).	미상	EPMA	AlVI vs. AlIV plot of the analyzed amphiboles. Two reference lines represent the pargasitic (Pa) and tschermakitic (Ts) substitutions, respectively. Note that the Pa substitution is identical to the sum of edenitic (Ed) and Ts substitutions. Compositions of amphiboles in the Samgot Formation vary less than those in the Chuncheon amphibolite (Lee and	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 PetroI_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
740	93330-1/38/45, 9341-32/34	Ca-(Mg+Mn)-Fe plot of the analyzed compositions of garnet. The compositional range of garnet in the Chuncheon amphibolite is from Lee (1993).	미상	EPMA	Ca-(Mg+Mn)-Fe plot of the analyzed compositions of garnet. The compositional range of garnet in the Chuncheon amphibolite is from Lee (1993).	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
741	93330-1/38/45, 9341-32/34	P-T estimates of the Samgot amphibolite, using the amphibole-plagioclase geothermometer of Holland and Blundy (1994) and the garnet-hornblende-plagioclase-quartz geobarometer of Kohn and Spear (1990). Reaction curves for the GRIPS assemblage (heavy line) are calculated using the GIBBS program (Spear and Menard, 1989) together with the compositions of garnet, plagioclase and ilmenite analyzed from specimens 93330-38 and -45. The equilibrium curve for the reaction between sillimanite and kyanite is from Holdaway (1971).	미상	EPMA	P-T estimates of the Samgot amphibolite, using the amphibole-plagioclase geothermometer of Holland and Blundy (1994) and the garnet-hornblende-plagioclase-quartz geobarometer of Kohn and Spear (1990). Reaction curves for the GRIPS assemblage (heavy line) are calculated using the GIBBS program (Spear and Menard, 1989) together with the compositions of garnet, plagioclase and ilmenite analyzed from specimens 93330-38 and -45. The equilibrium curve for the reaction between sillimanite and	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
742	93330-1/38/45, 9341-32/34	Sm-Nd isochron diagram of the Samgot amphibolite (sp. 93330-45). Whole-rock data are shown by open square, garnet and plagioclase separates by closed circles.	미상	EPMA	Sm-Nd isochron diagram of the Samgot amphibolite (sp. 93330-45). Whole-rock data are shown by open square, garnet and plagioclase separates by closed circles.	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
743	93330-1/38/45, 9341-32/34	Rb-Sr garnet - plagioclase - whole rock (open square) isochron for the Samgot amphibolite (sp. 93330-45).	미상	EPMA	Rb-Sr garnet - plagioclase - whole rock (open square) isochron for the Samgot amphibolite (sp. 93330-45).	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
744	93330-1/38/45, 9341-32/34	Visually-estimated mineral modes of the analyzed amphibolites	미상	EPMA	Visually-estimated mineral modes of the analyzed amphibolites	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
745	93330-1/38/45, 9341-32/34	Representative analyses of amphibole, garnet, diopside, titanite and ilmenite	미상	EPMA	Representative analyses of amphibole, garnet, diopside, titanite and ilmenite	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
746	93330-1/38/45, 9341-32/34	P-T estimates of the amphibolites, using Grt-Hb, Amp-Pl and GHPQ geothermobarometers	미상	EPMA	P-T estimates of the amphibolites, using Grt-Hb, Amp-Pl and GHPQ geothermobarometers	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
747	93330-1/38/45, 9341-32/34	P-T estimates using the GCPQ geothermobarometer and the GRIPS geobarometer	미상	EPMA	P-T estimates using the GCPQ geothermobarometer and the GRIPS geobarometer	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
748	93330-1/38/45, 9341-32/34	Sm-Nd isotope data of the Samgot amphibolite (sp. 93330-45)	미상	EPMA	Sm-Nd isotope data of the Samgot amphibolite (sp. 93330-45)	연천-전국 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500

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749	93330-1/38/45, 9341-32/34	Rb-Sr isotope data of the Samgot amphibolite (sp. 93330-45)	미상	EPMA	Rb-Sr isotope data of the Samgot amphibolite (sp. 93330-45)	연천-전곡 지역에 분포하는 임진강대의 고압 각섬암(암석학회지 Petrol_v04n1p001)	38.136389 126.952500; 38.136389 127.121389; 37.993333 127.121389; 37.993333 126.952500
750	2323/2221/2252/226 2/2283/2228/2258	Geologic map around the Janggunbong area. The Janggunbong and Dongsugog areas are studied in detail for polymetamorphism.	미상	EPMA	Geologic map around the Janggunbong area. The Janggunbong and Dongsugog areas are studied in detail for polymetamorphism.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
751	2323/2221/2252/226 2/2283/2228/2258	Post-tectonic andalusite (And) in the west of Janggunbong area. Open nicol, x40, Bt; Biotite, Hm; Hematite.	미상	EPMA	Post-tectonic andalusite (And) in the west of Janggunbong area. Open nicol, x40, Bt; Biotite, Hm; Hematite.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
752	2323/2221/2252/226 2/2283/2228/2258	Shear zone in the Chunyang Granite at Galsan.	미상	EPMA	Shear zone in the Chunyang Granite at Galsan.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
753	2323/2221/2252/226 2/2283/2228/2258	Mylonite in the Jaesan formation formed by Jaesan Thrust. Crossed nicols, x40.	미상	EPMA	Mylonite in the Jaesan formation formed by Jaesan Thrust. Crossed nicols, x40.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
754	2323/2221/2252/226 2/2283/2228/2258	Sample Location map around the Janggunbong area.	미상	EPMA	Sample Location map around the Janggunbong area.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
755	2323/2221/2252/226 2/2283/2228/2258	Pre-tectonic andalusite(And) at the Dongsugog Formation in the south-west of Janggunbong area. Open nicol, x40, Sil; Sillimanite, Gr; Graphite.	미상	EPMA	Pre-tectonic andalusite(And) at the Dongsugog Formation in the south-west of Janggunbong area. Open nicol, x40, Sil; Sillimanite, Gr; Graphite.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
756	2323/2221/2252/226 2/2283/2228/2258	Folded cleavage which consisted of biotite(Bt) and chloritoid(Cld). Open nicol, x40.	미상	EPMA	Folded cleavage which consisted of biotite(Bt) and chloritoid(Cld). Open nicol, x40.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
757	2323/2221/2252/226 2/2283/2228/2258	Mineral assemblage map showing five metamorphic zones of Paleozoic metasedimentary rocks in the Janggunbong and Samgunri area. Dotted line: Contact metamorphic zone, Broken line: Low-pressure regional metamorphic zone.	미상	EPMA	Mineral assemblage map showing five metamorphic zones of Paleozoic metasedimentary rocks in the Janggunbong and Samgunri area, Dotted line: Contact metamorphic zone, Broken line: Low-pressure regional metamorphic zone.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
758	2323/2221/2252/226 2/2283/2228/2258	Sillimanite(Sil) created after pre-tectonic andalusite(And) by contact metamorphism. Open nicol, x 40, Gr; Graphite, Qtz; Quartz.	미상	EPMA	Sillimanite(Sil) created after pre-tectonic andalusite(And) by contact metamorphism. Open nicol, x 40, Gr; Graphite, Qtz; Quartz.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
759	2323/2221/2252/226 2/2283/2228/2258	Kyanite(Ky) created after pre-tectonic andalusite (And). Open nicol, x40, Ms; Muscovite.	미상	EPMA	Kyanite(Ky) created after pre-tectonic andalusite (And). Open nicol, x40, Ms; Muscovite.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
760	2323/2221/2252/2262/2283/2228/2258	Phase diagrams show the evolution of mineral assemblages for the first metamorphism after Paleozoic era in the Janggunbong area. (A); Chloritoid Zone, (B); Staurolite Zone, (C); Garnet Zone, (D); Staurolite+biotite Zone, (E);Andalusite+Biotite Zone (Mcxiified from Spear,1993).	미상	EPMA	Phase diagrams show the evolution of mineral assemblages for the first metamorphism after Paleozoic era in the Janggunbong area. (A); Chloritoid Zone, (B); Staurolite Zone, (C); Garnet Zone, (D); Staurolite+biotite Zone, (E);Andalusite+Biotite Zone (Mcxiified from Spear,1993).	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
761	2323/2221/2252/2262/2283/2228/2258	Petrogenetic grid for the Janggunbong area. Ann; Annite Labels are correspond to Fig. 12 (Modified from Spear,1993).	미상	EPMA	Petrogenetic grid for the Janggunbong area. Ann; Annite Labels are correspond to Fig. 12 (Modified from Spear,1993).	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
762	2323/2221/2252/2262/2283/2228/2258	Composition profiles of garnets around the Jang-gunbong area. A, Taebaksan gneiss complex ; B, Jaesan Formation of Paleozoic metasedimentary rocks ; C and D, Taebaksan schist complex.	미상	EPMA	Composition profiles of garnets around the Jang-gunbong area. A, Taebaksan gneiss complex ; B, Jaesan Formation of Paleozoic metasedimentary rocks ; C and D, Taebaksan schist complex.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
763	2323/2221/2252/2262/2283/2228/2258	Mineral paragenesis of Paleozoic metasedimentary rocks around the Janggunbong area. A heavy line indicates that the minerals are common and abundant and a broken line indicates that those are rare.	미상	EPMA	Mineral paragenesis of Paleozoic metasedimentary rocks around the Janggunbong area. A heavy line indicates that the minerals are common and abundant and a broken line indicates that those are rare.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
764	2323/2221/2252/2262/2283/2228/2258	Chemical composition of garnets in the metasedimentary rocks around the Janggunbong area.	미상	EPMA	Chemical composition of garnets in the metasedimentary rocks around the Janggunbong area.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
765	2323/2221/2252/2262/2283/2228/2258	Chemical composition of biotites in the metasedimentary rocks around the Janggunbong area.	미상	EPMA	Chemical composition of biotites in the metasedimentary rocks around the Janggunbong area.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
766	2323/2221/2252/2262/2283/2228/2258	Chemical composition of chlorite in the metasedimentary rocks around the Janggunbong area	미상	EPMA	Chemical composition of chlorite in the metasedimentary rocks around the Janggunbong area	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
767	2323/2221/2252/2262/2283/2228/2258	Chemical composition of biotites in the metasedimentary rocks around the Janggunbong area.	미상	EPMA	Chemical composition of biotites in the metasedimentary rocks around the Janggunbong area.	장군봉 일대 선크브리아대-고생대 변성 퇴적암류의 다변성작용 - 북부 소백산육괴의 중앙부 지역의 지각진화와 환경지질 - (암석학회지 Petrol_v05n2p168)	36.882211 129.037292; 36.882211 129.133997; 36.821453 129.133997; 36.821453 129.037292
768	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Geologic map of the study area modified after Lee et al.(1975) and Kim, B.K.(1975). Numbers are the sample location.	미상	XRF, ICP-MS	Geologic map of the study area modified after Lee et al.(1975) and Kim, B.K.(1975). Numbers are the sample location.	오대산편마암복합체내에 산출되는 엠피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
769	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	SiO ₂ total alkali(TAS) diagram of the amphibolite in the study area. Symbols : open circle, amphibolite in the migmatitic gneiss; filled circle, amphibolite in the Guryong group; Cross(X), Sangguli amphibolite from Kwon et a. ,(1995); Plus(+), Gubongsan amphibolite from Kwon et al.(1995); triangle, Ogcheon amphibolite from Lee and Chang(1996).	미상	XRF, ICP-MS	SiO ₂ total alkali(TAS) diagram of the amphibolite in the study area. Symbols : open circle, amphibolite in the migmatitic gneiss; filled circle, amphibolite in the Guryong group; Cross(X), Sangguli amphibolite from Kwon et a. ,(1995); Plus(+), Gubongsan amphibolite from Kwon et al.(1995); triangle, Ogcheon amphibolite from Lee	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
770	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	MgO vs major element variation diagrams. Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	MgO vs major element variation diagrams. Symbols are the same as in Fig. 3.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
771	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	MgO vs trace element variation diagrams. Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	MgO vs trace element variation diagrams. Symbols are the same as in Fig. 3.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
772	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chondrite-normalized rare earth element pattern for the amphibolite. Filled region is the REE pattern of the Ogcheon amphibolite from Lee and Chang(1996). Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	Chondrite-normalized rare earth element pattern for the amphibolite. Filled region is the REE pattern of the Ogcheon amphibolite from Lee and Chang(1996). Symbols are the same as	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
773	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Schematic flow chart for the discrimination of the basaltic rocks modified after Pearce and Cann (1973).	미상	XRF, ICP-MS	Schematic flow chart for the discrimination of the basaltic rocks modified after Pearce and Cann (1973).	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
774	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	The Ti-Zr-Y discrimination diagram for the basaltic rocks(Pearce and Cann, 1973). Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	The Ti-Zr-Y discrimination diagram for the basaltic rocks(Pearce and Cann, 1973). Symbols are the same as in Fig. 3.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
775	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	The Zr-Nb-Y discrimination diagram for basaltic rocks (Meschede, 1986). Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	The Zr-Nb-Y discrimination diagram for basaltic rocks (Meschede, 1986). Symbols are the same as in Fig. 3.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
776	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	The TiO ₂ -Y, Nb discrimination diagram for basaltic rocks(Floyd and Winchester, 1975). Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	The TiO ₂ -Y, Nb discrimination diagram for basaltic rocks(Floyd and Winchester, 1975). Symbols are the same as in Fig. 3.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
777	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	The La-Y-Nb discrimination diagram for basaltic rocks(Cabani and Lecolle, 1975). Symbols are the same as in Fig. 3.	미상	XRF, ICP-MS	The La-Y-Nb discrimination diagram for basaltic rocks(Cabani and Lecolle, 1975). Symbols are the same as in Fig. 3.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
778	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Classification of the amphibole in the amphibolite.	미상	XRF, ICP-MS	Classification of the amphibole in the amphibolite.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
779	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Al(VI) vs Al(IV) and Al(IV) vs Al(IV)+Fe3++ 2Ti diagram of the amphibole in the amphibolite. Symbols are the same as in Fig. 12.	미상	XRF, ICP-MS	Al(VI) vs Al(IV) and Al(IV) vs Al(IV)+Fe3++ 2Ti diagram of the amphibole in the amphibolite. Symbols are the same as in Fig. 12.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
780	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of plagioclase plotted in the Or-Ab-An ternary diagram. Symbols; open circle, plagioclase in garnet free amphibolite; closed circle, plagioclase in garnet bearing amphibolite.	미상	XRF, ICP-MS	Chemical compositions of plagioclase plotted in the Or-Ab-An ternary diagram. Symbols; open circle, plagioclase in garnet free amphibolite; closed circle, plagioclase in garnet	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
781	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of garnet plotted in the Ca-Fe-Mg ternary diagram.	미상	XRF, ICP-MS	Chemical compositions of garnet plotted in the Ca-Fe-Mg ternary diagram.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
782	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Compositional zoning profiles of garnet in the amphibolite. XFe, Fe, (Fe+Mg); Xaim, Fe, M; Xprp, Mg, M; Xgrs, Ca, M; Xsps, Mn, M, where M, Fe+Mg+ Ca+Mn.	미상	XRF, ICP-MS	Compositional zoning profiles of garnet in the amphibolite. XFe, Fe, (Fe+Mg); Xaim, Fe, M; Xprp, Mg, M; Xgrs, Ca, M; Xsps, Mn, M, where M, Fe+Mg+	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
783	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	P-T path and metamorphic condition of the amphibolite. Garnet-rutile-ilmenite-plagioclase-quartz (CFTO system) reaction and Al ₂ SiO ₅ stability field are calculated by TWEEQ program (ver 2.02). Hatched squares are calculated by garnet-hornblende geothermometry and garnet-hornblende-plagioclase geobarometry. Filled square is calculated by garnet-biotite thermometry(GB) and garnet-biotite-plagioclase geobarometry (Hr 1 and Hr 2) in sample no. 84. Solid lines and open squares are from Kwon et al.(1997). Bold numbers are sample location.	미상	XRF, ICP-MS	P-T path and metamorphic condition of the amphibolite. Garnet-rutile-ilmenite-plagioclase-quartz (CFTO system) reaction and Al ₂ SiO ₅ stability field are calculated by TWEEQ program (ver 2.02). Hatched squares are calculated by garnet-hornblende geothermometry and garnet-hornblende-plagioclase geobarometry. Filled square is calculated by garnet-biotite thermometry(GB) and garnet-biotite-plagioclase geobarometry (Hr 1 and Hr 2) in sample no. 84. Solid lines and open squares are from Kwon et al.(1997). Bold numbers are sample location.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
784	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Quartz arenite-normalized spider diagram for the amphibolite. Hatched region is the amphibolite in the study area and filled region is the Ogcheon amphibolite from Lee and Chang(1996). Solid line is normalized NASC from Gromet et al.(1984),dashed line is normalized phanerozoic limestone from Condie et al. (1991).	미상	XRF, ICP-MS	Quartz arenite-normalized spider diagram for the amphibolite. Hatched region is the amphibolite in the study area and filled region is the Ogcheon amphibolite from Lee and Chang(1996). Solid line is normalized NASC from Gromet et al.(1984),dashed line is normalized phanerozoic limestone from Condie et al. (1991).	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
785	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Major and trace elements data of the amphibolite in the study area.	미상	XRF, ICP-MS	Major and trace elements data of the amphibolite in the study area.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
786	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of amphiboles in the study area.	미상	XRF, ICP-MS	Chemical compositions of amphiboles in the study area.	오대산편마암복합체내에 산출되는 앰피블라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667

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787	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of feldspar in the study area.	미상	XRF, ICP-MS	Chemical compositions of feldspar in the study area.	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
788	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of garnet in the study area.	미상	XRF, ICP-MS	Chemical compositions of garnet in the study area.	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
789	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of biotite in the study area.	미상	XRF, ICP-MS	Chemical compositions of biotite in the study area.	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
790	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Chemical compositions of pyroxene,epidote, ilmenite in the study area.	미상	XRF, ICP-MS	Chemical compositions of pyroxene,epidote, ilmenite in the study area.	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
791	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Temperatures estimated from the garnet-hornblende geothermometer(Graham & Powell, 1984).	미상	XRF, ICP-MS	Temperatures estimated from the garnet-hornblende geothermometer(Graham & Powell, 1984).	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
792	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Temperatures estimated from the amphibole-plagioclase	미상	XRF, ICP-MS	Temperatures estimated from the amphibole-plagioclase	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
793	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Temperature and pressure estimated from garnet-biotite-plagioclase.	미상	XRF, ICP-MS	Temperature and pressure estimated from garnet-biotite-plagioclase.	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
794	84, 7020, 7021, 10-1, 8523-1, 7034A, 7102, 7785, 86-1, 86-2	Pressures estimated from the GHPQ geobarometer (Kohn & Spear, 1990).	미상	XRF, ICP-MS	Pressures estimated from the GHPQ geobarometer (Kohn & Spear, 1990).	오대산편마암복합체내에 산출되는 앰피볼라이트의 지화학적 특성과 변성작용(암석학회지 Petrol_v07n2p111)	37.837611 128.299667; 37.837611 128.493878; 37.709617 128.493878; 37.709617 128.299667
795	G-3~60, E-3~62	Geologic map of the Bohyeunsan area. 1, Haman formation; 2, Daegu (Banyawol, Chunsan) formation; 3, Hwasan (Sinyangdong) formation; 4, rhyolitic volcanic rocks; 5, andesitic volcanic rocks; 6, gabbroic rocks; 7, granitic rocks.	미상	EPMA, XRF	Geologic map of the Bohyeunsan area. 1, Haman formation; 2, Daegu (Banyawol, Chunsan) formation; 3, Hwasan (Sinyangdong) formation; 4, rhyolitic volcanic rocks; 5, andesitic volcanic rocks; 6, gabbroic rocks; 7, granitic rocks.	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
796	G-3~60, E-3~62	Modal composition of the host granite and the enclave (after Streckeisen, 1976). ▼,enclave; O, granite. I, quartz diorite; II, quartz monzodiorite; HI, granodiorite; IV monzogranite; V syenogranite.	미상	EPMA, XRF	Modal composition of the host granite and the enclave (after Streckeisen, 1976). ▼,enclave; O, granite. I, quartz diorite; II, quartz monzodiorite; HI, granodiorite; IV monzogranite; V syenogranite.	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
797	G-3~60, E-3~62	Chemical composition of amphibole from the host granite and the enclave. ▼,core composition of amphibole from the enclave; ▽, rim from the enclave; *, core from the host granite; O, rim from the host granite.	미상	EPMA, XRF	Chemical composition of amphibole from the host granite and the enclave. ▼,core composition of amphibole from the enclave; ▽, rim from the enclave; *, core from the host granite; O, rim from the host granite.	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000

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798	G-3~60, E-3~62	Chemical composition of plagioclase from the host granite and the enclave. ▼,core composition of plagioclase from the enclave; ▽,rim from the enclave; •,core from the host granite; O, rim from the host granite.	미상	EPMA, XRF	Chemical composition of plagioclase from the host granite and the enclave. ▼,core composition of plagioclase from the enclave; ▽,rim from the enclave; •,core from the host granite; O, rim from the host granite.	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
799	G-3~60, E-3~62	Chemical composition of biotite from the host granite.	미상	EPMA, XRF	Chemical composition of biotite from the host granite.	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
800	G-3~60, E-3~62	Harker variation diagrams. ▼,enclave; O, granite	미상	EPMA, XRF	Harker variation diagrams. ▼,enclave; O, granite	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
801	G-3~60, E-3~62	Discrimination diagrams between alkaline and subalkaline (a), between tholeiitic and calcalkaline (b) (after Irvine and Baragar, 1971). Alumina saturation index of the host grange and the enclave (c).	미상	EPMA, XRF	Discrimination diagrams between alkaline and subalkaline (a), between tholeiitic and calcalkaline (b) (after Irvine and Baragar, 1971). Alumina saturation index of the host grange and the	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
802	G-3~60, E-3~62	Sketch showing the different types of hybridization obtained by injection of mafic magma into a granitic system at different stages of crystallization of the felsic magma (modified after Fernandez and Barbarin (1991)).	미상	EPMA, XRF	Sketch showing the different types of hybridization obtained by injection of mafic magma into a granitic system at different stages of crystallization of the felsic magma (modified after Fernandez and Barbarin (1991)).	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
803	G-3~60, E-3~62	Plot of major element contents vs. the weight fraction (T) of dioritic magma involved in the binary mixing process for the host granite and the enclave. ■, dioritic magma; ▼, average enclave; • the most mafic granodior- ite; half-filled square, average granodiorite; half-filled circle, average granite; O, granitic magma.	미상	EPMA, XRF	Plot of major element contents vs. the weight fraction (T) of dioritic magma involved in the binary mixing process for the host granite and the enclave. ■, dioritic magma; ▼, average enclave; • the most mafic granodior- ite; half-filled square, average granodiorite; half-filled circle, average granite; O, granitic	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
804	G-3~60, E-3~62	Modal composition of the host granites and the enclaves from the Bohyunsan area.	미상	EPMA, XRF	Modal composition of the host granites and the enclaves from the Bohyunsan area.	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
805	G-3~60, E-3~62	Chemical compositions and structural formulae of amphiboles from the host granite and the enclave	미상	EPMA, XRF	Chemical compositions and structural formulae of amphiboles from the host granite and the enclave	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
806	G-3~60, E-3~62	Chemical compositions and structural formulae of plagioclases from the host granite and the enclave	미상	EPMA, XRF	Chemical compositions and structural formulae of plagioclases from the host granite and the enclave	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
807	G-3~60, E-3~62	Chemical compositions and structural formulae of biotites from the host granite	미상	EPMA, XRF	Chemical compositions and structural formulae of biotites from the host granite	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 Petrol_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
808	G-3~60, E-3~62	Major element oxides (wt.%) and CIPW normative minerals of the host granite and the enclave from the Bohyunsan area	미상	EPMA, XRF	Major element oxides (wt.%) and CIPW normative minerals of the host granite and the enclave from the Bohyunsan area	의성분지 보현산 일대 화강암류와 포획암에 대한 암석학적 연구(암석학회지 PetroI_v09n3p187)	36.250000 128.750000; 36.250000 129.250000; 36.000000 129.250000; 36.000000 128.750000
809	UC1~12	Geologic map of the Ulsan mining area (after Choi, 1988).	미상	안정동위원소 분석	Geologic map of the Ulsan mining area (after Choi, 1988).	울산 광산에 분포하는 탄산염암체의 성인에 관한 연구: 카보내타이트의 가능성(암석학회지 PetroI_v10n1p001)	35.650000 129.300000; 35.650000 129.333333; 35.683333 129.333333; 35.683333 129.300000
810	UC1~12	Geologic structure map of the Ulsan mine area showing the Ulsan cauldron and the distribution of major faults (after Cha, 1985).	미상	안정동위원소 분석	Geologic structure map of the Ulsan mine area showing the Ulsan cauldron and the distribution of major faults (after Cha, 1985).	울산 광산에 분포하는 탄산염암체의 성인에 관한 연구: 카보내타이트의 가능성(암석학회지 PetroI_v10n1p001)	35.650000 129.300000; 35.650000 129.333333; 35.683333 129.333333; 35.683333 129.300000
811	UC1~12	Surface view of geologic map in the open pit area based on the core drilling data showing different lithological characters indicated by the dotted curves. The symbols show different occurrences of major rock types from drill cores: ■ = the presence of serpentinite and granitic rocks without carbonate rocks, ▲ = the presence of carbonate rocks in the upper part of cores and serpentinite and granitic rocks in the lower part, ◆ = the presence of carbonate rocks in the lower part, * = the presence of carbonate rocks with volcanic rocks and various metasomatic minerals, and O = only carbonate rocks with iron ores. See text for detailed discussion.	미상	안정동위원소 분석	Surface view of geologic map in the open pit area based on the core drilling data showing different lithological characters indicated by the dotted curves. The symbols show different occurrences of major rock types from drill cores: ■ = the presence of serpentinite and granitic rocks without carbonate rocks, ▲ = the presence of carbonate rocks in the upper part of cores and serpentinite and granitic rocks in the lower part, ◆ = the presence of carbonate rocks in the lower part, * = the presence of carbonate rocks with volcanic rocks and various metasomatic minerals, and O = only carbonate rocks with iron ores. See text for detailed	울산 광산에 분포하는 탄산염암체의 성인에 관한 연구: 카보내타이트의 가능성(암석학회지 PetroI_v10n1p001)	35.650000 129.300000; 35.650000 129.333333; 35.683333 129.333333; 35.683333 129.300000
812	UC1~12	Schematic cross-sectional view of A-B in Fig. 4. Note the inferred albititic alteration zone between serpentinite and granitic rocks. 1=sedimentary rocks, 2=volcanic rocks, 3=granitic rocks, 4=ultramafic rocks, 5= dacitic rocks, 6=albitite, 7=carbonatites, 8=in)n ore, 9=basal dikes.	미상	안정동위원소 분석	Schematic cross-sectional view of A-B in Fig. 4. Note the inferred albititic alteration zone between serpentinite and granitic rocks. 1=sedimentary rocks, 2=volcanic rocks, 3=granitic rock, 4=ultramafic rocks, 5= dacitic rocks, 6=albitite, 7=carbonatites, 8=in)n ore,	울산 광산에 분포하는 탄산염암체의 성인에 관한 연구: 카보내타이트의 가능성(암석학회지 PetroI_v10n1p001)	35.650000 129.300000; 35.650000 129.333333; 35.683333 129.333333; 35.683333 129.300000
813	UC1~12	Oxygen and carbon isotope data in calcite from the Ulsan carbonate rocks.	미상	안정동위원소 분석	Oxygen and carbon isotope data in calcite from the Ulsan carbonate rocks.	울산 광산에 분포하는 탄산염암체의 성인에 관한 연구: 카보내타이트의 가능성(암석학회지 PetroI_v10n1p001)	35.650000 129.300000; 35.650000 129.333333; 35.683333 129.333333; 35.683333 129.300000
814	DH00-1-170	Simplified geological map of Honcheon Fe-REE ore deposits.	미상	EPMA	Simplified geological map of Honcheon Fe-REE ore deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 PetroI_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
815	DH00-1-170	Injected carbonate rock, wall rock of fenite and quartz vein are well shown in drilling core.	미상	EPMA	Injected carbonate rock, wall rock of fenite and quartz vein are well shown in drilling core.	홍천 철-희토류광상의 암석기재학(암석학회지 PetroI_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
816	DH00-1-170	(a) Euhedral siderite of late stage in matrix (Open); Sd: siderite, Py: pyrite, Ca: carbonate mineral. (b) Backscattered electron image showing myrmekitic intergrowth of monazite (white) and strontiate (gray). (c) Magnetite (mt) is replaced by fergusonite (fg) in carbonate mineral (ca); cross. (d) same as photo c under open reflect light. (e) Columbite (cm) replaced by fergusonite (fg) in carbonate mineral (ca); cross. (f) Sugary texture albite (ab) and Na-amphibole (af) in fenite.	미상	EPMA	(a) Euhedral siderite of late stage in matrix (Open); Sd: siderite, Py: pyrite, Ca: carbonate mineral. (b) Backscattered electron image showing myrmekitic intergrowth of monazite (white) and strontiate (gray). (c) Magnetite (mt) is replaced by fergusonite (fg) in carbonate mineral (ca); cross. (d) same as photo c under open reflect light. (e) Columbite (cm) replaced by fergusonite (fg) in carbonate mineral (ca); cross. (f) Sugary texture albite (ab) and Na-amphibole (af) in fenite.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
817	DH00-1-170	Sketch of phlogopite (2) formed along the boundary of fenite (1) and injected carbonate rock (4). (3) area indicates Na-pyribole consisted of Na-amphibole and aegirin-augite.	미상	EPMA	Sketch of phlogopite (2) formed along the boundary of fenite (1) and injected carbonate rock (4). (3) area indicates Na-pyribole consisted of Na-amphibole and aegirin-augite.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
818	DH00-1-170	Mineral forming sequence of carbonate rock and fenite in studied area.	미상	EPMA	Mineral forming sequence of carbonate rock and fenite in studied area.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
819	DH00-1-170	Representative microprobe analysis of Ankerite, Siderite and Fe-magnesite from Hongcheon Fe-REE deposits.	미상	EPMA	Representative microprobe analysis of Ankerite, Siderite and Fe-magnesite from Hongcheon Fe-REE deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
820	DH00-1-170	Representative microprobe analysis of Strontianite. from Hongcheon Fe-REE deposits.	미상	EPMA	Representative microprobe analysis of Strontianite. from Hongcheon Fe-REE deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
821	DH00-1-170	Representative microprobe analysis of Columbite from Hongcheon Fe-REE deposits.	미상	EPMA	Representative microprobe analysis of Columbite from Hongcheon Fe-REE deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
822	DH00-1-170	Representative microprobe analysis of fergusonite from Hongcheon Fe-REE deposits.	미상	EPMA	Representative microprobe analysis of fergusonite from Hongcheon Fe-REE deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
823	DH00-1-170	Representation microprobe analysis of monazite from Hongcheon Fe-REE deposits.	미상	EPMA	Representation microprobe analysis of monazite from Hongcheon Fe-REE deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
824	DH00-1-170	Representation microprobe analysis of Na-Amphiboles from fenite.	미상	EPMA	Representation microprobe analysis of Na-Amphiboles from fenite.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
825	DH00-1-170	Representation microprobe analysis of aegirin-augite and acmite from fenite.	미상	EPMA	Representation microprobe analysis of aegirin-augite and acmite from fenite.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
826	DH00-1-170	Representation microprobe analysis of phlogopite from Hongcheon Fe-REE deposits.	미상	EPMA	Representation microprobe analysis of phlogopite from Hongcheon Fe-REE deposits.	홍천 철-희토류광상의 암석기재학(암석학회지 Petrol_v11n2p090)	37.935156 127.952114; 37.935156 128.038664; 37.822975 128.038664; 37.822975 127.952114
827	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13/19/23/48/49/ 49-1/51/51-1	Geological map of the southwest Sobaeksan massif showing the distribution of newly described massive and foliated charnockites and Hadong-Sancheong anorthosite complex. Sampling locations are shown by solid circles.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Geological map of the southwest Sobaeksan massif showing the distribution of newly described massive and foliated charnockites and Hadong-Sancheong anorthosite complex. Sampling locations are shown by solid	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
828	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13/19/23/48/49/ 49-1/51/51-1	QAP diagram (Streckeisen, 1974) for massive and foliated charnockites in the study area. Circles is massive charnockite, triangle is foliated charnockite. Open circle and triangle are value of CIPW norm and filled circle and triangle are value of mode analysis. 1: Charnockite, 2: Charnoenderbite, 3: Enderbite, 4: Quartz mangerite, 5: Quartz jotunite, 6: Mangerite, 7: Jotunite.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	QAP diagram (Streckeisen, 1974) for massive and foliated charnockites in the study area. Circles is massive charnockite, triangle is foliated charnockite. Open circle and triangle are value of CIPW norm and filled circle and triangle are value of mode analysis. 1: Charnockite, 2: Charnoenderbite, 3: Enderbite, 4: Quartz mangerite, 5: Quartz jotunite, 6: Mangerite, 7: Jotunite.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
829	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13/19/23/48/49/ 49-1/51/51-1	Photomicrographs of charnockites. (a) Opx coexisting with Kfs and Pl. (b) Reaction rim of Opx(-Oam-Hb). (c),(d) Overgrown Grt coexisting with Pl and Qtz. Abbreviations; Opx-Orthopyroxene, Pl-Plagioclase, Kfs-K-feldspar, Grt-Garnet, Qtz-Quartz, Oam-Orthoamphibole, Hb-Hornblende.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Photomicrographs of charnockites. (a) Opx coexisting with Kfs and Pl. (b) Reaction rim of Opx(-Oam-Hb). (c),(d) Overgrown Grt coexisting with Pl and Qtz. Abbreviations; Opx-Orthopyroxene, Pl-Plagioclase, Kfs-K-feldspar, Grt-Garnet, Qtz-Quartz, Oam-Orthoamphibole, Hb-Hornblende.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
830	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13/19/23/48/49/ 49-1/51/51-1	Rock classification diagrams for massive and foliated charnockites. (a) SiO ₂ -Alk(Na ₂ O+K ₂ O) diagram(Irvine and Baragar, 1971). (b) Alk(Na ₂ O+K ₂ O)-MgO-FeOt diagram(Irvine and Baragar, 1971). (c) A/CNK-A/NK diagram(Maniar and Piccoli, 1989). These are molar values of A=Al ₂ O ₃ , C=CaO, N=Na ₂ O, K=K ₂ O. (○: massive charnockite, △:foliated charnockite, ◇: Quartzofeldspathic gneiss, □: granitic gneiss, +: porphyroblastic gneiss).	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Rock classification diagrams for massive and foliated charnockites. (a) SiO ₂ -Alk(Na ₂ O+K ₂ O) diagram(Irvine and Baragar, 1971). (b) Alk(Na ₂ O+K ₂ O)-MgO-FeOt diagram(Irvine and Baragar, 1971). (c) A/CNK-A/NK diagram(Maniar and Piccoli, 1989). These are molar values of A=Al ₂ O ₃ , C=CaO, N=Na ₂ O, K=K ₂ O. (○: massive charnockite, △:foliated charnockite, ◇: Quartzofeldspathic gneiss, □: granitic gneiss, +: porphyroblastic gneiss).	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
831	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13/19/23/48/49/ 49-1/51/51-1	The Harker diagrams for massive and foliated charnockites in the study area. Symbols are the same as Fig. 5.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	The Harker diagrams for massive and foliated charnockites in the study area. Symbols are the same as Fig. 5.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
832	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Normative Anorthite(An)-Albite(Al)-Orthoclase (Or) diagram (O'Connor, 1965) for massive and foliated charnockites in the study area. Symbols are the same as Fig. 5.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Normative Anorthite(An)-Albite(Al)-Orthoclase (Or) diagram (O'Connor, 1965) for massive and foliated charnockites in the study area. Symbols are the same as Fig. 5.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
833	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Chondrite-normalized REE patterns of (a) massive and foliated charnockites with positive, no and negative Eu anomalies and (b) gneisses. Symbols are the same as Fig. 5.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Chondrite-normalized REE patterns of (a) massive and foliated charnockites with positive, no and negative Eu anomalies and (b) gneisses. Symbols are the same as Fig. 5.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
834	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Tectonic discrimination diagram (Pearce et al., 1984). (a) Log Y-Log Nb diagram. (b) Log Y+Nd-Log Rb diagram. Abbreviations; Syn-COLG-Syn-collision granites, VAG-Volcanic Arc Granites, WPG-Within Plate Granites, ORG-Ocean Ridge Granites. Symbols are the same as Fig. 5.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Tectonic discrimination diagram (Pearce et al., 1984). (a) Log Y-Log Nb diagram. (b) Log Y+Nd-Log Rb diagram. Abbreviations; Syn-COLG-Syn-collision granites, VAG-Volcanic Arc Granites, WPG-Within Plate Granites, ORG-Ocean Ridge Granites. Symbols are the same as Fig. 5.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
835	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Compositional zoning profile of garnet in charnockite. (a) MS 2-1 and (b) MS-2 are massive charnockite and (c) MS-23 is foliated charnockite.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Compositional zoning profile of garnet in charnockite. (a) MS 2-1 and (b) MS-2 are massive charnockite and (c) MS-23 is foliated charnockite.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
836	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Chemical composition of garnet plotted in the Ca-Mg-Fe ternary diagram.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Chemical composition of garnet plotted in the Ca-Mg-Fe ternary diagram.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
837	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	(a) P-T condition of the study area inferred from Geothermobarometric data. (b) P-T condition and anticlockwise P-T path of the study area. All reactions are calculated by the THERMOCALC program(ver. 2.7).	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	(a) P-T condition of the study area inferred from Geothermobarometric data. (b) P-T condition and anticlockwise P-T path of the study area. All reactions are calculated by the THERMOCALC program(ver. 2.7).	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
838	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Major element (wt%), trace element and REE (ppm) compositions of massive and foliated charnockites from Jirisan area.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Major element (wt%), trace element and REE (ppm) compositions of massive and foliated charnockites from Jirisan area.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
839	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Modes (%) of the Massive and Foliated charnockites from the Jirisan area.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Modes (%) of the Massive and Foliated charnockites from the Jirisan area.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
840	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Representative compositions of orthopyroxenes and amphiboles in the study area.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Representative compositions of orthopyroxenes and amphiboles in the study area.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
841	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Representative compositions of plagioclases and K-feldspars in the study area.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Representative compositions of plagioclases and K-feldspars in the study area.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
842	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Representative compositions of biotites in the study area.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Representative compositions of biotites in the study area.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
843	MS-2/2-1, 16/17/18/19, J-19, BH3 10.1/15.3/30.8, MS13'/19/23/48/49/ 49-1/51/51-1	Representative compositions of garnets in the study area.	THERMOCALC ver 2.7	XRF; ICP-MS; SEM	Representative compositions of garnets in the study area.	지리산 동부 지역에 분포하는 차노카이트의 변성작용과 성인에 관한 연구(암석학회지 Petrol_v11n3p138)	35.383333 127.750000; 35.383333 127.900000; 35.166667 127.900000; 35.166667 127.750000
844	K9610A/B, K9609A/B	Geological map of the study area in the central Yeongnam massif (Modified after Song, 1987).	미상	EPMA	Geological map of the study area in the central Yeongnam massif (Modified after Song, 1987).	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
845	K9610A/B, K9609A/B	Outcrop photographs showing (a) migmatized granite and biotite gneisses. (b) biotite gneiss xenolith in granite gneiss.	미상	EPMA	Outcrop photographs showing (a) migmatized granite and biotite gneisses. (b) biotite gneiss xenolith in granite gneiss.	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
846	K9610A/B, K9609A/B	Photographs showing (a) granite and (b) biotite gneisses.	미상	EPMA	Photographs showing (a) granite and (b) biotite gneisses.	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
847	K9610A/B, K9609A/B	Photomicrographs of granite (a, b, and c) and biotite gneisses (d: relict of garnet, e: clinopyroxene with reaction rim of amphibole and f: coexisting garnet and orthopyroxene).	미상	EPMA	Photomicrographs of granite (a, b, and c) and biotite gneisses (d: relict of garnet, e: clinopyroxene with reaction rim of amphibole and f: coexisting garnet and orthopyroxene).	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
848	K9610A/B, K9609A/B	Photographs of various zircon morphologies separated from the biotite gneiss.	미상	EPMA	Photographs of various zircon morphologies separated from the biotite gneiss.	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
849	K9610A/B, K9609A/B	Pb vs. U* diagram for a longish zircon from the biotite gneiss. (a) cross section showing analyzed 6 spots. (b) plots of Pb vs. U* diagram showing average age.	미상	EPMA	Pb vs. U* diagram for a longish zircon from the biotite gneiss. (a) cross section showing analyzed 6 spots. (b) plots of Pb vs. U* diagram showing average age.	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
850	K9610A/B, K9609A/B	Pb vs. U* diagram for a rounded single zircon grain from the biotite gneiss. (a) cross section showing analyzed 25 spots. (b) distribution of chemical ages calculated using the total Pb method. (c) plots of Pb vs. U* diagram showing average age.	미상	EPMA	Pb vs. U* diagram for a rounded single zircon grain from the biotite gneiss. (a) cross section showing analyzed 25 spots. (b) distribution of chemical ages calculated using the total Pb method. (c) plots of Pb vs. U* diagram showing average age.	중부 영남육괴 김천일대 선헤브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
851	K9610A/B, K9609A/B	EPMA analyses on zircon grains from granite and biotite gneisses of Gimcheon area.	미상	EPMA	EPMA analyses on zircon grains from granite and biotite gneisses of Gimcheon area.	중부 영남육괴 김천일대 선캄브리아기 편마암의 저어콘 화학연대(암석학회지 Petrol_v11n3p157)	36.250000 127.866667; 36.250000 128.300000; 35.816667 128.300000; 35.816667 127.866667
852	SE-7/18/20, PR-4/9/17, MT-16	Geologic map of the Ilgwang Cu-W mine area (after Flecher, 1977). Topographic contours are also shown.	미상	SEM	Geologic map of the Ilgwang Cu-W mine area (after Flecher, 1977). Topographic contours are also shown.	경상남도 일광의 각력파이프형 구리(Cu) 광상에서 산출되는 전기석의 지구화학(암석학회지 Petrol_v11n3p259)	35.308611 129.223889
853	SE-7/18/20, PR-4/9/17, MT-16	Mineral paragenesis at the Ilgwang mine (after Kang et al., 1976).	미상	SEM	Mineral paragenesis at the Ilgwang mine (after Kang et al., 1976).	경상남도 일광의 각력파이프형 구리(Cu) 광상에서 산출되는 전기석의 지구화학(암석학회지 Petrol_v11n3p259)	35.308611 129.223889
854	SE-7/18/20, PR-4/9/17, MT-16	Tourmalines at the Ilgwang mine showing characteristic textures and various pleochroism. (a) acicular aggregates of tourmalines intergrowing with quartz in the open-space filling in plane-polarized light. They are cut parallel (left T) or perpendicular (right T) to c-axis of tourmalines showing dark bluish pleochroism and (b) the same picture under crossed polars. (c) The curved trigonal cross-sectional outline of the tourmaline crystals showing zoning of the dark greenish to yellowish colors. (d) Tourmalines with biotite, garnet, quartz and chlorite in plane-polarized light and (e) the same picture under crossed polars, which is enlarged to show chlorite closer. (f) Anhedral tourmaline with zoning in plane-polarized light and (g) the same picture under crossed polars. (h) tourmaline replacing feldspars. Q = quartz, T = tourmaline, Bi = biotite, G = garnet, Chl = chlorite, F = feldspar.	미상	SEM	Tourmalines at the Ilgwang mine showing characteristic textures and various pleochroism. (a) acicular aggregates of tourmalines intergrowing with quartz in the open-space filling in plane-polarized light. They are cut parallel (left T) or perpendicular (right T) to c-axis of tourmalines showing dark bluish pleochroism and (b) the same picture under crossed polars. (c) The curved trigonal cross-sectional outline of the tourmaline crystals showing zoning of the dark greenish to yellowish colors. (d) Tourmalines with biotite, garnet, quartz and chlorite in plane-polarized light and (e) the same picture under crossed polars, which is enlarged to show chlorite closer. (f) Anhedral tourmaline with zoning in plane-polarized light and (g) the same picture under crossed polars. (h) tourmaline replacing feldspars. Q = quartz, T = tourmaline, Bi = biotite, G = garnet, Chl = chlorite, F = feldspar.	경상남도 일광의 각력파이프형 구리(Cu) 광상에서 산출되는 전기석의 지구화학(암석학회지 Petrol_v11n3p259)	35.308611 129.223889

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
855	SE-7/18/20, PR-4/9/17, MT-16	Plots of cation occupancies of tourmaline from the Igwang Cu-mine, southeastern Gyeongsang basin using the same symbols presented by Jiang et al. (1998). All analyzed data (not average values in the Table 1) are plotted. (a)Fe/(Fe + Mg) vs. Mg. (b) Na/(Na + Ca) vs. Na. (c) Fe/Mg ratio; schorl-dravite plot along the line Σ (Fe + Mg) = 3; values of (Fe + Mg) < 3 correspond to Al substitution in Y; values of Σ (Fe + Mg) > 3 would plot in the ferrischorl region. (d) The sum of sites X + Y vs. Z. (e) Variations of Fe/(Fe + Mg) vs. Al in Y. Solid and open symbols indicate the core and rim parts, respectively; diamonds= "MT", circles = sericitic, triangles=propylitic.	미상	SEM	Plots of cation occupancies of tourmaline from the Igwang Cu-mine, southeastern Gyeongsang basin using the same symbols presented by Jiang et al. (1998). All analyzed data (not average values in the Table 1) are plotted. (a)Fe/(Fe + Mg) vs. Mg. (b) Na/(Na + Ca) vs. Na. (c) Fe/Mg ratio; schorl-dravite plot along the line Σ (Fe + Mg) = 3; values of (Fe + Mg) < 3 correspond to Al substitution in Y; values of Σ (Fe + Mg) > 3 would plot in the ferrischorl region. (d) The sum of sites X + Y vs. Z. (e) Variations of Fe/(Fe + Mg) vs. Al in Y. Solid and open symbols indicate the core and rim parts, respectively; diamonds= "MT", circles = sericitic,	경상남도 일광의 각력파이프형 구리(Cu) 광상에서 산출되는 전기석의 지구화학(암석학회지 Petrol_v11n3p259)	35.308611 129.223889
856	SE-7/18/20, PR-4/9/17, MT-16	Average values of microprobe analyses of tourmaline from the Igwang Mine.	미상	SEM	Average values of microprobe analyses of tourmaline from the Igwang Mine.	경상남도 일광의 각력파이프형 구리(Cu) 광상에서 산출되는 전기석의 지구화학(암석학회지 Petrol_v11n3p259)	35.308611 129.223889
857	PH244/12-1	Geologic map of the study area and sampling sites modified after kim et al. (1963c).	미상	K-Ar 연대측정	Geologic map of the study area and sampling sites modified after kim et al. (1963c).	평해-울진 지역 선크브리아기 기성통의 부재 및 평해통과 원남통의 관계에 대한 소고(암석학회지 Petrol_v11n3p271)	36.833333 129.250000; 36.833333 129.433333; 36.733333 129.433333; 36.733333 129.250000
858	PH244/12-1	K-Ar isotope age data for Giseong Series.	미상	K-Ar 연대측정	K-Ar isotope age data for Giseong Series.	평해-울진 지역 선크브리아기 기성통의 부재 및 평해통과 원남통의 관계에 대한 소고(암석학회지 Petrol_v11n3p271)	36.833333 129.250000; 36.833333 129.433333; 36.733333 129.433333; 36.733333 129.250000
859	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Geological map of the Gadeog Island, Busan (modified from Jang et al., 1983). 1. Andesitic rocks(v) and altered andesite(r), 2. Rhyolitic rocks, 3. Hornblende granodiorite, and 4. Alluvium.	미상	EPMA, ICP-MS	Geological map of the Gadeog Island, Busan (modified from Jang et al., 1983). 1. Andesitic rocks(v) and altered andesite(r), 2. Rhyolitic rocks, 3. Hornblende granodiorite, and 4.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 Petrol_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
860	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Q-A-P diagram of the granitic rocks (symbols: +:Granite, ◇: Hornblende granodiorite, ◆: Tonalite, x: MME). (b). Ab-An-Or diagram for the feldspar compositions. [1: sanidine, 2: anorthoclase, 3: albite, 4: oligoclase, 5: andesine, 6: labradorite, 7: bytownite, 8: anorthite]. (c). Pyroxene compositions of the andesite in the system of Wo-En- Fs (Morimoto, 1988). [1: diopside, 2: hedenbergite, 3: augite, 4: pigeonite, 5: enstatite, 6: ferrosillite]. (d). Classification of amphibole from the hornblende granodiorite according to NaB vs. (Ca+Na)B (Leake and Winchell, 1978).	미상	EPMA, ICP-MS	Q-A-P diagram of the granitic rocks (symbols: +:Granite, ◇: Hornblende granodiorite, ◆: Tonalite, x: MME). (b). Ab-An-Or diagram for the feldspar compositions. [1: sanidine, 2: anorthoclase, 3: albite, 4: oligoclase, 5: andesine, 6: labradorite, 7: bytownite, 8: anorthite]. (c). Pyroxene compositions of the andesite in the system of Wo-En- Fs (Morimoto, 1988). [1: diopside, 2: hedenbergite, 3: augite, 4: pigeonite, 5: enstatite, 6: ferrosillite]. (d). Classification of amphibole from the hornblende granodiorite according to NaB vs. (Ca+Na)B (Leake and Winchell, 1978).	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 Petrol_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
861	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	(a). TAS diagram (Le Maitre, 1989) of the volcanic rocks. (b). AFM diagram of the igneous rocks (Irvine and Baragar, 1971) (Symbols: ◇: Hornblende granodiorite, ◆: Tonalite, x: MME, ▲: Andesite, ●: Andesite tuff, △: rhyolite, ○: rhyolite tuff), (c). TiO ₂ vs FeOt/MgO diagram. Thol: typical tholeiitic trend of the Skaergaard intrusion, Am: typical calc-alkaline trend of the Amagi volcano, Japan (Miyashiro, 1974).	미상	EPMA, ICP-MS	(a). TAS diagram (Le Maitre, 1989) of the volcanic rocks. (b). AFM diagram of the igneous rocks (Irvine and Baragar, 1971) (Symbols: ◇: Hornblende granodiorite, ◆: Tonalite, x: MME, ▲: Andesite, ●: Andesite tuff, △: rhyolite, ○: rhyolite tuff), (c). TiO ₂ vs FeOt/MgO diagram. Thol: typical tholeiitic trend of the Skaergaard intrusion, Am: typical calc-alkaline trend of the Amagi volcano, Japan (Miyashiro, 1974).	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
862	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Harker variation diagrams. Symbols are the same as in Fig. 4.	미상	EPMA, ICP-MS	Harker variation diagrams. Symbols are the same as in Fig. 4.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
863	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Some trace elements vs. SiO ₂ variation diagram. Symbols are the same as in Fig. 4.	미상	EPMA, ICP-MS	Some trace elements vs. SiO ₂ variation diagram. Symbols are the same as in Fig. 4.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
864	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	MORB-normalized trace elements patterns. (a) Andesite, (b) Andesite tuff and rhyolite tuff, (c) rhyolite, and (d) granitic rocks. Symbols are the same as in Fig. 4.	미상	EPMA, ICP-MS	MORB-normalized trace elements patterns. (a) Andesite, (b) Andesite tuff and rhyolite tuff, (c) rhyolite, and (d) granitic rocks. Symbols are the same as in Fig. 4.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
865	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Chondrite-normalized REE patterns. (a) Andesite, (b) Andesite tuff and rhyolite tuff, (c) rhyolite, and (d) granitic rocks. Symbols are the same as in Fig. 4.	미상	EPMA, ICP-MS	Chondrite-normalized REE patterns. (a) Andesite, (b) Andesite tuff and rhyolite tuff, (c) rhyolite, and (d) granitic rocks. Symbols are the same as in Fig. 4.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
866	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	(a). Tectonic discrimination diagram (Wood, 1980) of the volcanic rocks (Field A: N-type MORB, B: E-type MORB and tholeiitic WPB and differentiates, C: alkaline WPB and differentiates, and D: destructive plate margin basalt and differentiates). (b). Tectonic discrimination diagram (Pearce et al., 1984) of the granitic rocks.	미상	EPMA, ICP-MS	(a). Tectonic discrimination diagram (Wood, 1980) of the volcanic rocks (Field A: N-type MORB, B: E-type MORB and tholeiitic WPB and differentiates, C: alkaline WPB and differentiates, and D: destructive plate margin basalt and differentiates). (b). Tectonic discrimination diagram (Pearce et al., 1984) of the granitic rocks.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
867	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Modal composition of the volcanic rocks in Gadeog Island.	미상	EPMA, ICP-MS	Modal composition of the volcanic rocks in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
868	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Modal compositions of the granitic rocks in Gadeog Island.	미상	EPMA, ICP-MS	Modal compositions of the granitic rocks in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
869	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	The representative chemical compositions of plagioclase from the rocks in Gadeog Island.	미상	EPMA, ICP-MS	The representative chemical compositions of plagioclase from the rocks in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroL_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
870	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Chemical compositions of clinopyroxene from the andesite in Gadeog Island.	미상	EPMA, ICP-MS	Chemical compositions of clinopyroxene from the andesite in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroI_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
871	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Chemical compositions (wt.%) of hornblende from the granitic rocks in Gadeog Island.	미상	EPMA, ICP-MS	Chemical compositions (wt.%) of hornblende from the granitic rocks in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroI_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
872	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Major element composition (wt.%) and CIPW norm of the igneous rocks in Gadeog Island.	미상	EPMA, ICP-MS	Major element composition (wt.%) and CIPW norm of the igneous rocks in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroI_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
873	184/308/311/821/822/831/834/191/195/197/111/182/823/110/825/824	Some trace and rare earth element analyses (ppm) of the igneous rocks in Gadeog Island.	미상	EPMA, ICP-MS	Some trace and rare earth element analyses (ppm) of the igneous rocks in Gadeog Island.	부산 가덕도 지역 백악기 화성암류에 대한 암석학적 연구(암석학회지 PetroI_v13n2p047)	35.166667 128.750000; 35.166667 129.000000; 35.000000 129.000000; 35.000000 128.750000
874	5-1/6-3/6-1	Geological map of the study area. JI, Jungtaesan Intrusion; GI, Galpyeongji Intrusion.	미상	EPMA	Geological map of the study area. JI, Jungtaesan Intrusion; GI, Galpyeongji Intrusion.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 PetroI_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
875	5-1/6-3/6-1	The variety of spherulitic rhyolites in Cheongsong area. a, Chrysanthemum type; b, Dandelion type; c, Carnation type; d, Peony type; e, Rose type; f, Innominate type; g, Dahlia type; h, Sunflower type.	미상	EPMA	The variety of spherulitic rhyolites in Cheongsong area. a, Chrysanthemum type; b, Dandelion type; c, Carnation type; d, Peony type; e, Rose type; f, Innominate type; g, Dahlia type; h, Sunflower type.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 PetroI_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
876	5-1/6-3/6-1	The photo of spherulitic rhyolites. (a) spherulites occur as single one or aggregate, (b) Carnation type spherulites occur with Innominate type, (c) and (d) Dandelion type spherulites occur at the bottom of dyke and Chrysanthemum type at the top, (e) Rose type spherulites occur with fine veinlets and vesicles, (f) spherulites occur along the layers representing fluid infiltration.	미상	EPMA	The photo of spherulitic rhyolites. (a) spherulites occur as single one or aggregate, (b) Carnation type spherulites occur with Innominate type, (c) and (d) Dandelion type spherulites occur at the bottom of dyke and Chrysanthemum type at the top, (e) Rose type spherulites occur with fine veinlets and vesicles, (f) spherulites occur along the layers representing fluid infiltration.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 PetroI_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
877	5-1/6-3/6-1	The microphoto (a, Open Nicol; b, Cross Nicol) and X-ray maps (c, Si; d, Na; e, K; f, Fe) of Chrysanthemum type spherulite.	미상	EPMA	The microphoto (a, Open Nicol; b, Cross Nicol) and X-ray maps (c, Si; d, Na; e, K; f, Fe) of Chrysanthemum type spherulite.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 PetroI_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
878	5-1/6-3/6-1	The microphoto (a, Open Nicol; b, Cross Nicol) and X-ray maps (c, Si; d, Al; e, Na; f, K) of Innominate type spherulite.	미상	EPMA	The microphoto (a, Open Nicol; b, Cross Nicol) and X-ray maps (c, Si; d, Al; e, Na; f, K) of Innominate type spherulite.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 PetroI_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
879	5-1/6-3/6-1	The microphoto (a, Open Nicol; b, Cross Nicol) and X-ray maps (c, Si; d, Al; e, Na; f, Fe) of Dahlia type spherulite.	미상	EPMA	The microphoto (a, Open Nicol; b, Cross Nicol) and X-ray maps (c, Si; d, Al; e, Na; f, Fe) of Dahlia type spherulite.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 PetroI_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
880	5-1/6-3/6-1	The silver dichromate precipitate patterns relating to the cooling rate (a, cooling time 30 min; b, 45 min; c, 60 min; Data from Carl and Amstutz, 1958). d) Rhythmic precipitate of potassium dichromate produced by evaporation (Data from Leveson, 1963)	미상	EPMA	The silver dichromate precipitate patterns relating to the cooling rate (a, cooling time 30 min; b, 45 min; c, 60 min; Data from Carl and Amstutz, 1958). d) Rhythmic precipitate of potassium dichromate produced by evaporation (Data from Leveson, 1963)	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 Petrol_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
881	5-1/6-3/6-1	The origin and classification of spherulitic rhyolites in Cheongsong	미상	EPMA	The origin and classification of spherulitic rhyolites in Cheongsong	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 Petrol_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
882	5-1/6-3/6-1	Chemical compositions of feldspar and chlorite in Cheongsong spherulitic rock	미상	EPMA	Chemical compositions of feldspar and chlorite in Cheongsong spherulitic rock	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 Petrol_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
883	5-1/6-3/6-1	K-Ar age data of whole rock from spherulitic rhyolites.	미상	EPMA	K-Ar age data of whole rock from spherulitic rhyolites.	청송 주왕산 북부 일대의 구과상 유문암에 대한 연구(암석학회지 Petrol_v13n2p103)	36.583333 129.100000; 36.583333 129.250000; 36.450000 129.250000; 36.450000 129.100000
884	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	Geological map of the Waryongsan area and a cross section. 1. Chilgok Formation; 2. Shilla Conglomerate; 3. Haman Formation; 4. Jindong Formation; 5. andesitic rocks; 6. porphyritic granite; 7. porphyritic granodiorite; 8. fine-grained granite.	미상	XRF	Geological map of the Waryongsan area and a cross section. 1. Chilgok Formation; 2. Shilla Conglomerate; 3. Haman Formation; 4. Jindong Formation; 5. andesitic rocks; 6. porphyritic granite; 7. porphyritic granodiorite; 8. fine-grained granite.	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333
885	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	Modal compositions(quartz-alkalifeldspar-plagioclase) of granitic rocks and MMEs in the the Waryongsan area. Granitic rocks are monzogranite and granodiorite. MMEs are quartzdiorite, quartzmonzodiorite and tonalite (pg (●)), porphyritic granite; pgd (■), porphyritic granodiorite; fg (◆), fine-grained granite; MME (▲), mafic microgranular enclave).	미상	XRF	Modal compositions(quartz-alkalifeldspar-plagioclase) of granitic rocks and MMEs in the the Waryongsan area. Granitic rocks are monzogranite and granodiorite. MMEs are quartzdiorite, quartzmonzodiorite and tonalite (pg (●), porphyritic granite; pgd (■), porphyritic granodiorite; fg (◆), fine-grained granite; MME (▲), mafic	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333
886	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	Photographs of andesitic rocks and granitic rocks in the Waryongsan area. (a) andesitic lava in the Waryongsan area; (b) andesitic tuff in the Waryongsan area; (C) boundary between andesitic lava and porphyritic granite; (d) MME in the porphyritic granite margin; (e) porphyritic texture in the porphyritic granite margin; (f) porphyritic texture in the porphyritic granite margin (an, andesite; pg, porphyritic granite; mme, mafic microgranular enclave; pl, plagioclase; qtz, quartz).	미상	XRF	Photographs of andesitic rocks and granitic rocks in the Waryongsan area. (a) andesitic lava in the Waryongsan area; (b) andesitic tuff in the Waryongsan area; (C) boundary between andesitic lava and porphyritic granite; (d) MME in the porphyritic granite margin; (e) porphyritic texture in the porphyritic granite margin; (f) porphyritic texture in the porphyritic granite margin (an, andesite; pg, porphyritic granite; mme, mafic microgranular enclave; pl,	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
887	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	Major oxide content vs. SiO ₂ content in the Waryongsan granitic rocks.	미상	XRF	Major oxide content vs. SiO ₂ content in the Waryongsan granitic rocks.	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333
888	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	(Above) Illustration showing development of sheet-like mafic bodies in granite by injection of mafic magma into felsic magma chamber (I→II→III→IV). (Below) A cross section of the Waryongsan granitic body and distribution of MMEs. 1. andesitic rocks; 2. porphyritic granite; 3. porphyritic granodiorite; 4. fine-grained granite; (a), 10~15% distribution of MMEs in porphyritic granite; (b), about 50% distribution of MMEs in porphyritic granodiorite; (c), about 20% distribution of MMEs in fine-grained granite (pg, porphyritic granite; pgd, porphyritic granodiorite; fg, fine-grained granite; mme, mafic microgranular enclave).	미상	XRF	(Above) Illustration showing development of sheet-like mafic bodies in granite by injection of mafic magma into felsic magma chamber (I→II→III→IV). (Below) A cross section of the Waryongsan granitic body and distribution of MMEs. 1. andesitic rocks; 2. porphyritic granite; 3. porphyritic granodiorite; 4. fine-grained granite; (a), 10~15% distribution of MMEs in porphyritic granite; (b), about 50% distribution of MMEs in porphyritic granodiorite; (c), about 20% distribution of MMEs in fine-grained granite (pg, porphyritic granite; pgd, porphyritic granodiorite; fg, fine-grained granite; mme, mafic microgranular enclave).	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333
889	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	Modal compositions of granitic rocks and MMEs in the Waryongsan area.	미상	XRF	Modal compositions of granitic rocks and MMEs in the Waryongsan area.	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333
890	BC01~11, SA01~04, SD01~11, Cy01~16, YJ01~12	Major oxide contents and normative mineral contents of granitic rocks and MMEs in the Waryongsan area.	미상	XRF	Major oxide contents and normative mineral contents of granitic rocks and MMEs in the Waryongsan area.	경상분지 남서부 와룡산 일대에 분포하는 백악기 화강암류에 관한 암석학적 연구: 마그마 불균질 혼합에 의한 화강암류의 조성변화(암석학회지 Petrol_v14n1p012)	35.050000 128.033333; 35.050000 128.200000; 34.933333 128.200000; 34.933333 128.033333
891	Udo 405-9	Geological map of the monogenetic Udo volcano area(modified from Hwang, 1993; Won et al., 1993).	미상	EPMA, XRF	Geological map of the monogenetic Udo volcano area(modified from Hwang, 1993; Won et al., 1993).	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231

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892	Udo 405-9	Photomicrographs of tholeiitic basalt. (a) Tholeiitic texture (sample, 405-16). (crossed polars). (b) Tholeiitic texture (sample, 405-16), (open polar). (c) Euhedral olivine phenocrysts (sample, 405-14). (crossed polars). (d) Skeletal texture of olivine phenocrysts(sample, 405-1). (crossed polars). (e) Olivine phenocryst and its surrounding small clinopyroxene crystals (sample, 405-12). (crossed polars). (f) Albite-Carlsbad twin and albite twin of plagioclase phenocryst (sample, 405-13). (crossed nicols). (g & h) Sieve texture of plagioclase phenocryst(sample, 405-9 & 405-7). (crossed nicols). (i & j) Phenocrysts of orthopyroxene(sample, 405-8). (crossed nicols). (k) Small olivine crystals around the orthopyroxene phenocrysts (sample, 405-11). (crossed nicols). (l) Reaction rim of clinopyroxene around the orthopyroxene phenocryst(sample, 405-12). (crossed nicols). Abbreviation: Ol=olivine, Cpx=clinopyroxene, and Pl=plagioclase.	미상	EPMA, XRF	Photomicrographs of tholeiitic basalt. (a) Tholeiitic texture (sample, 405-16). (crossed polars). (b) Tholeiitic texture (sample, 405-16), (open polar). (c) Euhedral olivine phenocrysts (sample, 405-14). (crossed polars). (d) Skeletal texture of olivine phenocrysts(sample, 405-1). (crossed polars). (e) Olivine phenocryst and its surrounding small clinopyroxene crystals (sample, 405-12). (crossed polars). (f) Albite-Carlsbad twin and albite twin of plagioclase phenocryst (sample, 405-13). (crossed nicols). (g & h) Sieve texture of plagioclase phenocryst(sample, 405-9 & 405-7). (crossed nicols). (i & j) Phenocrysts of orthopyroxene(sample, 405-8). (crossed nicols). (k) Small olivine crystals around the orthopyroxene phenocrysts (sample, 405-11). (crossed nicols). (l) Reaction rim of clinopyroxene around the orthopyroxene phenocryst(sample, 405-12). (crossed nicols). Abbreviation: Ol=olivine,	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
893	Udo 405-9	Or-Ab-An diagram showing plagioclase compositions of the basaltic rocks. [1. sanidine, 2. anorthoclase, 3. albite, 4. oligoclase, 5. andesine, 6. labradorite, 7. bytownite, 8. anorthite] (Deer et al., 1963). mph: microphenocrysts, gm: plagioclase laths in groundmass.	미상	EPMA, XRF	Or-Ab-An diagram showing plagioclase compositions of the basaltic rocks. [1. sanidine, 2. anorthoclase, 3. albite, 4. oligoclase, 5. andesine, 6. labradorite, 7. bytownite, 8. anorthite] (Deer et al., 1963). mph: microphenocrysts, gm: plagioclase laths in groundmass.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
894	Udo 405-9	An content variation diagram from core to margin of plagioclase microphenocrysts of the basaltic rocks.	미상	EPMA, XRF	An content variation diagram from core to margin of plagioclase microphenocrysts of the basaltic rocks.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
895	Udo 405-9	Fo(Mg/(Mg+Fe+2)) vs. Fa(Fe+2/(Mg+Fe+2)) in olivine from the basaltic rocks. [1. forsterite, 2. chrysolite, 3. hyaloserite, 4. hortonolite, 5. ferro-hortonolite, 6. fayalite] (Deer et al., 1963). ph: phenocrysts, mph: microphenocrysts, gm: olivine in groundmass.	미상	EPMA, XRF	Fo(Mg/(Mg+Fe+2)) vs. Fa(Fe+2/(Mg+Fe+2)) in olivine from the basaltic rocks. [1. forsterite, 2. chrysolite, 3. hyaloserite, 4. hortonolite, 5. ferro-hortonolite, 6. fayalite] (Deer et al., 1963). ph: phenocrysts, mph: microphenocrysts, gm: olivine in	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
896	Udo 405-9	Pyroxene compositions of the basaltic rocks. [1. diopside, 2. hedenbergite, 3. augite, 4. pigeonite, 5. enstatite, 6. errosillite] (Morimoto, 1989). (ph: phenocrysts(opx), gm: cpx in groundmass, olrim: cpx in reaction rim of olivine.	미상	EPMA, XRF	Pyroxene compositions of the basaltic rocks. [1. diopside, 2. hedenbergite, 3. augite, 4. pigeonite, 5. enstatite, 6. errosillite] (Morimoto, 1989). (ph: phenocrysts(opx), gm: cpx in groundmass, olrim: cpx in reaction rim	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231

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897	Udo 405-9	FeOT (wt.%) vs. TiO ₂ , (b) Fe ₂ O ₃ -FeTiO ₃ -MnTiO ₃ diagram for the ilmenites in the basaltic rocks.	미상	EPMA, XRF	FeOT (wt.%) vs. TiO ₂ , (b) Fe ₂ O ₃ -FeTiO ₃ -MnTiO ₃ diagram for the ilmenites in the basaltic rocks.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
898	Udo 405-9	(a) Total alkali vs. SiO ₂ (wt.%) (Le Bas et al., 1986) plot of the volcanic rocks. The dividing line between alkaline (A) and sub-alkaline (SA) magma series is from Irvine and Baragar (1971). Line F-G is division for tholeiitic and alkaline rocks in Hawaii (Macdonald and Katsura, 1964) and (b) Alkali Index (A.I.) vs. Al ₂ O ₃ (wt.%) for the classification of tholeiitic (TH) and calc-alkaline basalts (CAB) (Middlemost, 1975).	미상	EPMA, XRF	(a) Total alkali vs. SiO ₂ (wt.%) (Le Bas et al., 1986) plot of the volcanic rocks. The dividing line between alkaline (A) and sub-alkaline (SA) magma series is from Irvine and Baragar (1971). Line F-G is division for tholeiitic and alkaline rocks in Hawaii (Macdonald and Katsura, 1964) and (b) Alkali Index (A.I.) vs. Al ₂ O ₃ (wt.%) for the classification of tholeiitic (TH) and calc-alkaline basalts (CAB) (Middlemost, 1975).	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
899	Udo 405-9	Collapse of the basalt tetrahedron into the 2dimension diagram of normative components Ne-Ol-Di- Hy-Qtz (Hyndman, 1985). Symbol: (open circle: Udo Someori basalt).	미상	EPMA, XRF	Collapse of the basalt tetrahedron into the 2dimension diagram of normative components Ne-Ol-Di- Hy-Qtz (Hyndman, 1985). Symbol: (open circle: Udo Someori basalt).	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
900	Udo 405-9	K-Ar whole rock age determination of the basalt lava from Udo, Jeju Island, Korea.	미상	EPMA, XRF	K-Ar whole rock age determination of the basalt lava from Udo, Jeju Island, Korea.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
901	Udo 405-9	Modal compositions of the basaltic rocks in the Udo area.	미상	EPMA, XRF	Modal compositions of the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
902	Udo 405-9	Representative microprobe analyses of plagioclases from the basaltic rocks in the Udo area.	미상	EPMA, XRF	Representative microprobe analyses of plagioclases from the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
903	Udo 405-9	Representative microprobe analyses of olivines from the basaltic rocks in the Udo area.	미상	EPMA, XRF	Representative microprobe analyses of olivines from the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
904	Udo 405-9	Representative microprobe analyses of clinopyroxenes from the basaltic rocks in the Udo area.	미상	EPMA, XRF	Representative microprobe analyses of clinopyroxenes from the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
905	Udo 405-9	Representative microprobe analyses of orthopyroxenes from the basaltic rocks in the Udo area.	미상	EPMA, XRF	Representative microprobe analyses of orthopyroxenes from the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
906	Udo 405-9	Representative microprobe analyses of ilmenites from the basaltic rocks in the Udo area.	미상	EPMA, XRF	Representative microprobe analyses of ilmenites from the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231

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907	Udo 405-9	Major element abundances (wt.%) and CIPW norm of the basaltic rocks in the Udo area.	미상	EPMA, XRF	Major element abundances (wt.%) and CIPW norm of the basaltic rocks in the Udo area.	제주도 우도 단성화산의 현무암에 대한 암석학적 연구(암석학회지 Petrol_v14n1p045)	33.526864 126.934231; 33.526864 126.975958; 33.486689 126.975958; 33.486689 126.934231
908	OW1/2	Geological map of the study area, and the location of boring hole in granitic gneiss.	미상	XRF, ICP-MS	Geological map of the study area, and the location of boring hole in granitic gneiss.	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
909	OW1/2	(a) AFM diagram showing that protoliths of the granitic gneiss, metabasite and amphibolite belong to the tholeiitic and the calc-alkaline with the latter dominating in abundance. (b) Plot of normative feldspar composition showing classification of acid rocks (O'Connor, 1965). Trond: trondhjemite, Tonal: tonalite, Grano-d.: granodiorite.	미상	XRF, ICP-MS	(a) AFM diagram showing that protoliths of the granitic gneiss, metabasite and amphibolite belong to the tholeiitic and the calc-alkaline with the latter dominating in abundance. (b) Plot of normative feldspar composition showing classification of acid rocks (O'Connor, 1965). Trond: trondhjemite, Tonal: tonalite, Grano-d.: granodiorite.	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
910	OW1/2	Chondrite-normalized REE pattern (Masuda et al., 1973; Masuda, 1975) of metamorphic rock cores at Samyuri, Muju. OW2-172: Garnet porphyroblastic granitic gneiss. (a)-(c): granitic gneiss, (d): amphibolites (including of data (MJ1-10) by Lee et al. (1997).	미상	XRF, ICP-MS	Chondrite-normalized REE pattern (Masuda et al., 1973; Masuda, 1975) of metamorphic rock cores at Samyuri, Muju. OW2-172: Garnet porphyroblastic granitic gneiss. (a)-(c): granitic gneiss, (d): amphibolites (including of data (MJ1-10) by Lee et al. (1997).	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
911	OW1/2	(a) Sm -Nd isochron (b) Rb-Sr errorchron diagram for the gneiss and amphibolite cores.	미상	XRF, ICP-MS	(a) Sm -Nd isochron (b) Rb-Sr errorchron diagram for the gneiss and amphibolite cores.	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
912	OW1/2	Replotted Sm-Nd whole rock and mineral isochron diagram for amphibolites based on this study and Lee et al. (1997).	미상	XRF, ICP-MS	Replotted Sm-Nd whole rock and mineral isochron diagram for amphibolites based on this study and Lee et al. (1997).	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
913	OW1/2	Nd isotope evolution diagram for the granitoids and orthogneisses including the granitoids, orthogneiss and amphibolites of North China Craton (Yellow area, Wu et al., 2005) and for the constituent rocks of Yangtze Craton (Green area, Chen and Jahn, 1998). The depleted-mantle line is drawn with $\epsilon_{Nd}(0) = +10$ and $\epsilon_{Nd}(4.55Ga) = 0$. CHUR = chondritic uniform reservoir (After Lee et al., 2005). Note that the granitic gneisses in this study are plotted in the expected Nd isotope evolution line in Yeongnam Massif.	미상	XRF, ICP-MS	Nd isotope evolution diagram for the granitoids and orthogneisses including the granitoids, orthogneiss and amphibolites of North China Craton (Yellow area, Wu et al., 2005) and for the constituent rocks of Yangtze Craton (Green area, Chen and Jahn, 1998). The depleted-mantle line is drawn with $\epsilon_{Nd}(0) = +10$ and $\epsilon_{Nd}(4.55Ga) = 0$. CHUR = chondritic uniform reservoir (After Lee et al., 2005). Note that the granitic gneisses in this study are plotted in the expected Nd isotope evolution line in Yeongnam Massif.	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
914	OW1/2	Tectonic discrimination diagram based on (a) Rb vs. Yb + Ta diagrams of Pearce et al. (1984) based on chemical composition of granitic gneiss core. Fields: syn-COLG = syn-collisional granites, WPG = within-plate granites, ORG = ocean ridge granites, VAG = volcanic arc granites.	미상	XRF, ICP-MS	Tectonic discrimination diagram based on (a) Rb vs. Yb + Ta diagrams of Pearce et al. (1984) based on chemical composition of granitic gneiss core. Fields: syn-COLG = syn-collisional granites, WPG = within-plate granites, ORG = ocean ridge granites, VAG =	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
915	OW1/2	(a) K-Rb, (b) Rb-Sr, (c) Ba-MgO, (d) Ba-Sr correlation diagram from granitic gneiss and amphibolite cores at Samyuri area, Muju.	미상	XRF, ICP-MS	(a) K-Rb, (b) Rb-Sr, (c) Ba-MgO, (d) Ba-Sr correlation diagram from granitic gneiss and amphibolite cores at Samyuri area, Muju.	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
916	OW1/2	Petrography of the core samples used in chemical analysis	미상	XRF, ICP-MS	Petrography of the core samples used in chemical analysis	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
917	OW1/2	Major element composition (%) and REE abundance (ppm) of the core samples from the boreholes in Muju area, Korea	미상	XRF, ICP-MS	Major element composition (%) and REE abundance (ppm) of the core samples from the boreholes in Muju area, Korea	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
918	OW1/2	Rb-Sr and Sm-Nd isotopic data for the gneiss cores from the two holes (OW1 and OW2) at Samyuri area, Muju, Korea	미상	XRF, ICP-MS	Rb-Sr and Sm-Nd isotopic data for the gneiss cores from the two holes (OW1 and OW2) at Samyuri area, Muju, Korea	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
919	OW1/2	Summary for Sm-Nd isotope ratio including previous data (MJ1-MJ10: Lee et al., 1997) at Samyuri area, Muju, Korea	미상	XRF, ICP-MS	Summary for Sm-Nd isotope ratio including previous data (MJ1-MJ10: Lee et al., 1997) at Samyuri area, Muju, Korea	영남육괴 중부 무주지역에 위치하는 선캄브리아기 화강편마암 및 앵피블라이트 시추코아의 Sm-Nd 연대 및 지구화학적 특징(암석학회지 Petrol_v14n3p127)	36.000000 127.500000; 36.000000 127.750000; 35.833333 127.750000; 35.833333 127.500000
920	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Geologic map of the Kyochonri, Muan, Cheonnam.	미상	EPMA, XRD	Geologic map of the Kyochonri, Muan, Cheonnam.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
921	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Microphotograph of limestone (sample Mu70).	미상	EPMA, XRD	Microphotograph of limestone (sample Mu70).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
922	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Drilling sites at Kyochonri area (Muan-gun, 2006).	미상	EPMA, XRD	Drilling sites at Kyochonri area (Muan-gun, 2006).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
923	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Columnar section of drill holes at Kyochonri area (Muan-gun, 2006).	미상	EPMA, XRD	Columnar section of drill holes at Kyochonri area (Muan-gun, 2006).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
924	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	An outcrop of weathered limestone at the Muan.	미상	EPMA, XRD	An outcrop of weathered limestone at the Muan.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186

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925	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	An intensively weathered part, the right part of Fig. 6.	미상	EPMA, XRD	An intensively weathered part, the right part of Fig. 6.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
926	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	XRD peak of sample Mu66.	미상	EPMA, XRD	XRD peak of sample Mu66.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
927	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	XRD peak of sample Mu26.	미상	EPMA, XRD	XRD peak of sample Mu26.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
928	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	A outcrop of calcareous rock (Mu67).	미상	EPMA, XRD	A outcrop of calcareous rock (Mu67).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
929	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	A cutting plane of weathered calcareous rock.	미상	EPMA, XRD	A cutting plane of weathered calcareous rock.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
930	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	A photograph of thinsection calcareous rock (Mu67).	미상	EPMA, XRD	A photograph of thinsection calcareous rock (Mu67).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
931	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	A microphotograph of sample Mu67 (right circle of Fig 12 (5×, cross Nicol).	미상	EPMA, XRD	A microphotograph of sample Mu67 (right circle of Fig 12 (5×, cross Nicol).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
932	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	Microphotograph of sample Mu67 (left circle of Fig 12 (10×, open Nicol).	미상	EPMA, XRD	Microphotograph of sample Mu67 (left circle of Fig 12 (10×, open Nicol).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
933	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	Microphotograph of sample Mu67 (left circle of Fig 12 (10×, cross Nicol).	미상	EPMA, XRD	Microphotograph of sample Mu67 (left circle of Fig 12 (10×, cross Nicol).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
934	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	Photograph of limestone outcrop (Mu16). Many yellow projecting parts are weathered schist.	미상	EPMA, XRD	Photograph of limestone outcrop (Mu16). Many yellow projecting parts are weathered schist.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
935	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	Rock specimen of outcrop (Mu16). reddish brown projecting part is weathered schist, gray part is limestone.	미상	EPMA, XRD	Rock specimen of outcrop (Mu16). reddish brown projecting part is weathered schist, gray part is limestone.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
936	Mu01/02/07/16/27/ 66/67/68/69/70, Core4/6	Photograph of thin section sample Mu16. yellow color is weathered schist.	미상	EPMA, XRD	Photograph of thin section sample Mu16. yellow color is weathered schist.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
937	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Microphotograph of sample Mu16 (yellow part of Fig. 18 (10×, cross Nicol).	미상	EPMA, XRD	Microphotograph of sample Mu16 (yellow part of Fig. 18 (10×, cross Nicol).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
938	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	BSE image of sample Mu16 (×100).	미상	EPMA, XRD	BSE image of sample Mu16 (×100).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
939	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	BSE image of sample Mu16 (×200).	미상	EPMA, XRD	BSE image of sample Mu16 (×200).	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
940	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	BSE image of sample Mu16 (×1000). Cc: calcite, Qz: quartz, Mi: mica.	미상	EPMA, XRD	BSE image of sample Mu16 (×1000). Cc: calcite, Qz: quartz, Mi: mica.	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
941	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Major elements of various rocks in the Muan Kyochonri area	미상	EPMA, XRD	Major elements of various rocks in the Muan Kyochonri area	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
942	Mu01/02/07/16/27/66/67/68/69/70, Core4/6	Distribution and size of caverns at Kyochonri area	미상	EPMA, XRD	Distribution and size of caverns at Kyochonri area	전남 무안지역에 분포하는 석회질암의 용식작용과 지반침하(암석학회지 Petrol_v16n2p047)	35.005378 126.445186; 35.005378 129.488300; 34.967133 129.488300; 34.967133 126.445186
943	3319/3320/3322/200 2a~j	Simplified regional geologic map of the northeastern Yeongnam Massif and the location (Lo) of the outcrop in this study.	미상	ICP-MS, XRF	Simplified regional geologic map of the northeastern Yeongnam Massif and the location (Lo) of the outcrop in this study.	강원도 임원지역 우백질 화강편마암에 나타난 희토류 원소 테트라드 효과의 지구화학적 의의(암석학회지 Petrol_v16n1p027)	37.331389 129.123056; 37.331389 129.564722; 37.125833 129.564722; 37.125833 129.123056
944	3319/3320/3322/200 2a~j	Chondrite-normalized REE patterns (Masuda et al., 1973; Masuda, 1975) for the samples at the outcrop in Fig. 2. (a) and (b): leucocratic granite gneiss, (c): leucocratic-pegmatitic granite gneiss (d): weathered biotite gneisses. The samples in (a) and (c) were measured by ID-TIMS (JEOL 05-RB mass spectrometer). The samples in (b) and (d) were measured by ICP-MS.	미상	ICP-MS, XRF	Chondrite-normalized REE patterns (Masuda et al., 1973; Masuda, 1975) for the samples at the outcrop in Fig. 2. (a) and (b): leucocratic granite gneiss, (c): leucocratic-pegmatitic granite gneiss (d): weathered biotite gneisses. The samples in (a) and (c) were measured by ID-TIMS (JEOL 05-RB mass spectrometer). The samples in (b) and (d) were measured by ICP-MS.	강원도 임원지역 우백질 화강편마암에 나타난 희토류 원소 테트라드 효과의 지구화학적 의의(암석학회지 Petrol_v16n1p027)	37.331389 129.123056; 37.331389 129.564722; 37.125833 129.564722; 37.125833 129.123056
945	3319/3320/3322/200 2a~j	A plot of the degree of REE tetrad effect (T1, Monecke et al., 2002) vs. (a) Eu/Eu*, and (b) Y/Ho.	미상	ICP-MS, XRF	A plot of the degree of REE tetrad effect (T1, Monecke et al., 2002) vs. (a) Eu/Eu*, and (b) Y/Ho.	강원도 임원지역 우백질 화강편마암에 나타난 희토류 원소 테트라드 효과의 지구화학적 의의(암석학회지 Petrol_v16n1p027)	37.331389 129.123056; 37.331389 129.564722; 37.125833 129.564722; 37.125833 129.123056

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
946	3319/3320/3322/2002a~j	Chondrite normalized Rb-Sr-Ba and REE pattern (Masuda et al., 1973; Masuda, 1975) of leucocratic granite gneiss measured by ID-TIMS. (b) Chondrite normalized Rb-Sr-Ba and REE pattern of leucocratic-pegmatitic gneisses measured by ID-TIMS. (c) A plot of Ca/Sr vs. Eu/Eu*, (d) A plot of Ca/Sr vs. K/Ba.	미상	ICP-MS, XRF	Chondrite normalized Rb-Sr-Ba and REE pattern (Masuda et al., 1973; Masuda, 1975) of leucocratic granite gneiss measured by ID-TIMS. (b) Chondrite normalized Rb-Sr-Ba and REE pattern of leucocratic-pegmatitic gneisses measured by ID-TIMS. (c) A plot of Ca/Sr vs. Eu/Eu*, (d) A plot of Ca/Sr vs.	강원도 임원지역 우백질 화강편마암에 나타난 희토류 원소 테트라드 효과의 지구 화학적 의의(암석학회지 Petrol_v16n1p027)	37.331389 129.123056; 37.331389 129.564722; 37.125833 129.564722; 37.125833 129.123056
947	3319/3320/3322/2002a~j	Samples and their status	미상	ICP-MS, XRF	Samples and their status	강원도 임원지역 우백질 화강편마암에 나타난 희토류 원소 테트라드 효과의 지구 화학적 의의(암석학회지 Petrol_v16n1p027)	37.331389 129.123056; 37.331389 129.564722; 37.125833 129.564722; 37.125833 129.123056
948	3319/3320/3322/2002a~j	Major element composition (wt. %) and REE, Sr, Rb, Ba abundances (ppm) for the leucocratic granite gneiss and biotite gneiss from Imweon area, Korea. GR: leucocratic granite gneiss, QTZ: leucocratic-pegmatitic granite gneiss, SCH: biotite gneiss, (S): soil	미상	ICP-MS, XRF	Major element composition (wt. %) and REE, Sr, Rb, Ba abundances (ppm) for the leucocratic granite gneiss and biotite gneiss from Imweon area, Korea. GR: leucocratic granite gneiss, QTZ: leucocratic-pegmatitic granite gneiss, SCH: biotite gneiss, (S): soil	강원도 임원지역 우백질 화강편마암에 나타난 희토류 원소 테트라드 효과의 지구 화학적 의의(암석학회지 Petrol_v16n1p027)	37.331389 129.123056; 37.331389 129.564722; 37.125833 129.564722; 37.125833 129.123056
949	HM18/20	Geological map of the study area. Index map shows the distribution of the major ductile shear zones in the Honam Shear Zone and the locality of the study area.	미상	EPMA	Geological map of the study area. Index map shows the distribution of the major ductile shear zones in the Honam Shear Zone and the locality of the study area.	강진 인근 주라기 엽리상 화강암류의 CHIME 모자나이트 연대측정(암석학회지 Petrol_v16n3p101)	34.551389 126.705556 34.588611 126.733333
950	HM18/20	Backscattered electron images of monazite grains from samples HM18 (a-d) and HM20 (e-f). Scale bars are 50 μ m. Dark spots in the monazite grains are biotite, apatite, quartz and feldspar inclusions, and bright core in the grain d is an inherited monazite.	미상	EPMA	Backscattered electron images of monazite grains from samples HM18 (a-d) and HM20 (e-f). Scale bars are 50 μ m. Dark spots in the monazite grains are biotite, apatite, quartz and feldspar inclusions, and bright core in the grain d is an inherited monazite.	강진 인근 주라기 엽리상 화강암류의 CHIME 모자나이트 연대측정(암석학회지 Petrol_v16n3p101)	34.551389 126.705556 34.588611 126.733333
951	HM18/20	PbO-ThO ₂ * plots and histograms of apparent ages for analysed spots on monazite.	미상	EPMA	PbO-ThO ₂ * plots and histograms of apparent ages for analysed spots on monazite.	강진 인근 주라기 엽리상 화강암류의 CHIME 모자나이트 연대측정(암석학회지 Petrol_v16n3p101)	34.551389 126.705556 34.588611 126.733333
952	HM18/20	Frequency diagrams of crystallization ages for the granitoids in South Korea (modified from Sagong et al., 2005). Data sources are from this study, unpublished data of D.-L. Cho, and Sagong et al. (2005) and references in it.	미상	EPMA	Frequency diagrams of crystallization ages for the granitoids in South Korea (modified from Sagong et al., 2005). Data sources are from this study, unpublished data of D.-L. Cho, and Sagong et al. (2005) and references in it.	강진 인근 주라기 엽리상 화강암류의 CHIME 모자나이트 연대측정(암석학회지 Petrol_v16n3p101)	34.551389 126.705556 34.588611 126.733333
953	CO1~15,S7/11-3/17L/26	Geologic map from study area. Mineral assemblage of most metasedimentary and metaigneous rocks and sampling sites of leucogranites and migmatite leucosomes are shown for representative samples. Mineral abbreviations are after Kretz (1983).	미상	XRF, ICP-MS	Geologic map from study area. Mineral assemblage of most metasedimentary and metaigneous rocks and sampling sites of leucogranites and migmatite leucosomes are shown for representative samples. Mineral abbreviations are after Kretz (1983).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
954	CO1~15,S7/11-3/17L/26	Petrogenetic grid constructed with program Gibbs (Spear and Menard, 1989) using dataset of Holland and Powell (1998). A grey rectangle near Grt zone is P-T value of TWQ estimated using mineral data.	미상	XRF, ICP-MS	Petrogenetic grid constructed with program Gibbs (Spear and Menard, 1989) using dataset of Holland and Powell (1998). A grey rectangle near Grt zone is P-T value of TWQ estimated using mineral data.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
955	CO1~15,S7/11-3/17L/26	Harker diagrams showing difference among metasedimentary rocks (dashed field), biotite granitic gneisses (gray field; unpublished data) and leucogranites (black circles). (a) FeOtot value is calculated by $FeO_{3tot} \times 0.8998$.	미상	XRF, ICP-MS	Harker diagrams showing difference among metasedimentary rocks (dashed field), biotite granitic gneisses (gray field; unpublished data) and leucogranites (black circles). (a) FeOtot value is calculated by $FeO_{3tot} \times$	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
956	CO1~15,S7/11-3/17L/26	Rock classification diagrams. (a) R1-R2 diagram of leucogranite (black dots) and biotite granite gneiss (gray field) related to tectonic setting (dashed lines; Batchelor and Bowden, 1985) and rock classification (solid lines; De la Roche et al., 1980). In rock classification, 1: granodiorite, 2: granite and 3: alkali granite. A gray field is biotite granitic gneisses (b) A/CNK [Molar $Al_2O_3/(CaO + Na_2O + K_2O)$] vs. Discriminant factor (DF) diagram. Symbols are the same as Fig. 4.	미상	XRF, ICP-MS	Rock classification diagrams. (a) R1-R2 diagram of leucogranite (black dots) and biotite granite gneiss (gray field) related to tectonic setting (dashed lines; Batchelor and Bowden, 1985) and rock classification (solid lines; De la Roche et al., 1980). In rock classification, 1: granodiorite, 2: granite and 3: alkali granite. A gray field is biotite granitic gneisses (b) A/CNK [Molar $Al_2O_3/(CaO + Na_2O + K_2O)$] vs. Discriminant factor (DF) diagram. Symbols are the same as	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
957	CO1~15,S7/11-3/17L/26	Multi-element variation diagrams normalized to the primitive mantle value of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	미상	XRF, ICP-MS	Multi-element variation diagrams normalized to the primitive mantle value of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
958	CO1~15,S7/11-3/17L/26	Rare earth element (REE) variation diagrams normalized to the chondrite values of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	미상	XRF, ICP-MS	Rare earth element (REE) variation diagrams normalized to the chondrite values of Taylor and McLennan (1985). (a) Type I leucogranites. (b) Type II leucogranites with leucosomes. Gray fields are metasedimentary rocks.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
959	CO1~15,S7/11-3/17L/26	CIPW normative Qtz-Or-Ab composition of leucogranites represents the glass compositions obtained by melting biotite schist (1, 2; gray field and solid arrow) and two-mica (3; dashed field and arrow) pelites at 750-1000°C, 3 kbar (Spicer et al., 2004). Arrows represent compositional change of melts with increasing temperature. Liquidus phase relations in the system Qtz-Ab-Or-H ₂ O at 5 kbar and X(H ₂ O) = 1.0 are taken from Holtz et al. (1992)	미상	XRF, ICP-MS	CIPW normative Qtz-Or-Ab composition of leucogranites represents the glass compositions obtained by melting biotite schist (1, 2; gray field and solid arrow) and two-mica (3; dashed field and arrow) pelites at 750-1000°C, 3 kbar (Spicer et al., 2004). Arrows represent compositional change of melts with increasing temperature. Liquidus phase relations in the system Qtz-Ab-Or-H ₂ O at 5 kbar and X(H ₂ O) = 1.0 are taken from Holtz et al. (1992)	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
960	CO1~15,S7/11-3/17L/26	ectonic discrimination diagram of leucogranite (black circles) and biotite granite gneiss (gray field) based on (a) Rb vs. Y+Nb, (b) Nb vs. Y, (c) Rb vs. Ta+Yb and (d) Ta vs. Yb. Tectonic abbreviations : syn-collisional granite (syn-COLG), volcanic arc granite (VAG), within plate granite (WPG) and oceanic ridge granite (ORG).	미상	XRF, ICP-MS	ectonic discrimination diagram of leucogranite (black circles) and biotite granite gneiss (gray field) based on (a) Rb vs. Y+Nb, (b) Nb vs. Y, (c) Rb vs. Ta+Yb and (d) Ta vs. Yb. Tectonic abbreviations : syn-collisional granite (syn-COLG), volcanic arc granite (VAG), within plate granite (WPG) and oceanic ridge granite (ORG).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
961	CO1~15,S7/11-3/17L/26	Chondrite-normalized REE pattern (Taylor and McLennan, 1985) of component mixture models. (a) Mineral modal property in migmatite (P19-1) from study area and REE concentrations in melanosome from Bea et al. (1994). (b) Leucogranite (CP02) and rhyolite from Nash and Crecraft (1994). Data are listed Table 7.	미상	XRF, ICP-MS	Chondrite-normalized REE pattern (Taylor and McLennan, 1985) of component mixture models. (a) Mineral modal property in migmatite (P19-1) from study area and REE concentrations in melanosome from Bea et al. (1994). (b) Leucogranite (CP02) and rhyolite from Nash and Crecraft (1994). Data are listed Table 7.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
962	CO1~15,S7/11-3/17L/26	(a) Ba vs. Sr, (b) Ba vs. Eu, (c) Rb vs. Sr and (d) Rb vs. Eu variations with vector lines according to partition coefficients of plagioclase, K-feldspar, biotite and garnet in rhyolite (Nash and crecraft, 1985; N) and leucosome (Bea et al., 1994; B). Gray area is biotite granitic gneiss. Dashed area is metasedimentary rocks.	미상	XRF, ICP-MS	(a) Ba vs. Sr, (b) Ba vs. Eu, (c) Rb vs. Sr and (d) Rb vs. Eu variations with vector lines according to partition coefficients of plagioclase, K-feldspar, biotite and garnet in rhyolite (Nash and crecraft, 1985; N) and leucosome (Bea et al., 1994; B). Gray area is biotite granitic gneiss. Dashed area is metasedimentary	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
963	CO1~15,S7/11-3/17L/26	List of mineral assemblage of representative samples.	미상	XRF, ICP-MS	List of mineral assemblage of representative samples.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
964	CO1~15,S7/11-3/17L/26	Major element (wt%) data for leucogranites and a leucosome and metasedimentary rock with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	미상	XRF, ICP-MS	Major element (wt%) data for leucogranites and a leucosome and metasedimentary rock with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
965	CO1~15,S7/11-3/17L/26	Trace and rare earth element (ppm) data for leucogranites, leucosomes and metasedimentray rocks with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	미상	XRF, ICP-MS	Trace and rare earth element (ppm) data for leucogranites, leucosomes and metasedimentray rocks with average compositional data of metasedimentary rocks (M), biotite granitic gneisses (B) and leucogranites (L).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
966	CO1~15,S7/11-3/17L/26	Resultant value of models and mineral data in melanosome from migmatite (Bea et al., 1994) used for modeling.	미상	XRF, ICP-MS	Resultant value of models and mineral data in melanosome from migmatite (Bea et al., 1994) used for modeling.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petro/v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
967	CO1~15,S7/11-3/17L/26	Resultant value of models and mineral data in rhyolite (Nash and Crecraft, 1985) used for modeling.	미상	XRF, ICP-MS	Resultant value of models and mineral data in rhyolite (Nash and Crecraft, 1985) used for modeling.	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
968	CO1~15,S7/11-3/17L/26	Summary of F values estimated by Equation (6).	미상	XRF, ICP-MS	Summary of F values estimated by Equation (6).	삼척지역 북동 영남 육괴에 분포하는 우백질 화강암의 기원 및 진화(암석학회지 Petrol_v17n1p016)	37.463056 129.119444; 37.463056 129.208611; 37.409167 129.208611; 37.409167 129.119444
969	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Geological map of the study area(modified from Chang et al., 1983). 1; Cretaceous volcanic rocks, 2; Hornblende granodiorite(++) and Biotite granite(+*), 3; Cheonjabong andesite/basaltic andesite, 4; Sirubong andesite, 5; Cheonjabong basalt, 6; Alluvium.	미상	EPMA, ICP-MS, XRF	Geological map of the study area(modified from Chang et al., 1983). 1; Cretaceous volcanic rocks, 2; Hornblende granodiorite(++) and Biotite granite(+*), 3; Cheonjabong andesite/basaltic andesite, 4; Sirubong andesite, 5; Cheonjabong basalt, 6;	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
970	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Sampling sites in the study area.	미상	EPMA, ICP-MS, XRF	Sampling sites in the study area.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
971	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Photomicrograph of Chenojaam basaltic andesite.	미상	EPMA, ICP-MS, XRF	Photomicrograph of Chenojaam basaltic andesite.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
972	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	(a) Photograph of Cheonjabong basalt. (b)~(d) Photomicrograph of Cheonjabong basalt.	미상	EPMA, ICP-MS, XRF	(a) Photograph of Cheonjabong basalt. (b)~(d) Photomicrograph of Cheonjabong basalt.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
973	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Olivine compositions for Cheonjabong basalt (Deer et al., 1972).	미상	EPMA, ICP-MS, XRF	Olivine compositions for Cheonjabong basalt (Deer et al., 1972).	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
974	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	An-Ab-Or diagram (Deer et al., 1972) showing plagioclase compositions for basalt and andesitic rocks. (a) Cheonjabong basalt (●), (b) Cheonjabong basaltic andesite (■), (c) Cheonjabong andesite (◆) and Sirubong andesite (▼).	미상	EPMA, ICP-MS, XRF	An-Ab-Or diagram (Deer et al., 1972) showing plagioclase compositions for basalt and andesitic rocks. (a) Cheonjabong basalt (●), (b) Cheonjabong basaltic andesite (■), (c) Cheonjabong andesite (◆) and	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
975	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Pyroxene compositions for basalt and andesitic rocks in the system of CaSiO ₃ -MgSiO ₃ -FeSiO ₃ (Morimoto, 1988). Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	Pyroxene compositions for basalt and andesitic rocks in the system of CaSiO ₃ -MgSiO ₃ -FeSiO ₃ (Morimoto, 1988). Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
976	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	(a) Nomenclature for basaltic and andesitic rocks in the study area based on TAS-diagram (wt.%) (after Cox et al., 1979). (b) Na ₂ O+K ₂ O vs SiO ₂ discriminant diagram (after Irvine and Baragar, 1971) for basaltic and andesitic rocks in the study area . Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	(a) Nomenclature for basaltic and andesitic rocks in the study area based on TAS-diagram (wt.%) (after Cox et al., 1979). (b) Na ₂ O+K ₂ O vs SiO ₂ discriminant diagram (after Irvine and Baragar, 1971) for basaltic and andesitic rocks in the study area . Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
977	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	(a) (Na ₂ O+K ₂ O)-FeOT-MgO (AFM; after Kuno, 1968) diagram for andesitic rocks in the study area. (b) K ₂ O vs. SiO ₂ diagram (after Gill, 1981) for andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	(a) (Na ₂ O+K ₂ O)-FeOT-MgO (AFM; after Kuno, 1968) diagram for andesitic rocks in the study area. (b) K ₂ O vs. SiO ₂ diagram (after Gill, 1981) for andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
978	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	The classification diagram (after Yoder and Tilley, 1962; Thompson, 1984) of basalts to CIPW normative composition for basaltic rocks in the study area. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	The classification diagram (after Yoder and Tilley, 1962; Thompson, 1984) of basalts to CIPW normative composition for basaltic rocks in the study area. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
979	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Harker variation diagrams of major oxides vs. MgO for basaltic and andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	Harker variation diagrams of major oxides vs. MgO for basaltic and andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
980	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Al ₂ O ₃ /CaO vs. MgO for basaltic and andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	Al ₂ O ₃ /CaO vs. MgO for basaltic and andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
981	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Discriminant tectonic setting diagrams (after Gill, 1981) of the volcanic rocks in the study area, (a) Nb vs. Zr diagram (after Briggs and McDonough), (b) La vs. Th diagram, (c) La vs. Ba diagram and (d) La vs. Nb diagram. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	Discriminant tectonic setting diagrams (after Gill, 1981) of the volcanic rocks in the study area, (a) Nb vs. Zr diagram (after Briggs and McDonough), (b) La vs. Th diagram, (c) La vs. Ba diagram and (d) La vs. Nb diagram. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
982	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	N-Type MORB normalized spider diagram for basaltic and andesitic rocks in the study area. N-type MORB data from Hawkesworth and Powell(1980). (a) Cheonjabong andesite, (b) Cheonjabong basaltic andesite, (c) Sirubong andesite, and (d) Cheonjabong basalt. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	N-Type MORB normalized spider diagram for basaltic and andesitic rocks in the study area. N-type MORB data from Hawkesworth and Powell(1980). (a) Cheonjabong andesite, (b) Cheonjabong basaltic andesite, (c) Sirubong andesite, and (d) Cheonjabong basalt. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
983	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Harker variation diagrams of trace element vs. MgO for basaltic and andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	Harker variation diagrams of trace element vs. MgO for basaltic and andesitic rocks in the study area. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
984	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Hf/3-Th-Ta discrimination diagram of the basaltic and andesitic rocks (after Wood, 1980). A; N-type MORB, B; E-type MORB and tholeiites within-plate basalts, C; alkaline within-plate basalts, D; destructive plate margin basalt. Island-arc tholeiites plot in field D where Hf/Th > 3.0 and calc-alkaline basalts plot where Hf/Th < 3.0. Symbols are the same as those in Fig. 7.	미상	EPMA, ICP-MS, XRF	Hf/3-Th-Ta discrimination diagram of the basaltic and andesitic rocks (after Wood, 1980). A; N-type MORB, B; E-type MORB and tholeiites within-plate basalts, C; alkaline within-plate basalts, D; destructive plate margin basalt. Island-arc tholeiites plot in field D where Hf/Th > 3.0 and calc-alkaline basalts plot where Hf/Th < 3.0. Symbols are the same as those in Fig. 7.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
985	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Isotopic age data of the volcanic rocks in the study area. SA; Sirubong andesite, CB; Cheonjabong basalt.	미상	EPMA, ICP-MS, XRF	Isotopic age data of the volcanic rocks in the study area. SA; Sirubong andesite, CB; Cheonjabong basalt.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
986	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Modal compositions of the volcanic rocks in the study area. Modes based on about 2000 points count per samples. Phenocrysts; 0.1 mm>, groundmass; <0.1 mm, pl; plagioclase, ol; olivine, cpx; clinopyroxene, ore; opaque minerals, epi; epidote.	미상	EPMA, ICP-MS, XRF	Modal compositions of the volcanic rocks in the study area. Modes based on about 2000 points count per samples. Phenocrysts; 0.1 mm>, groundmass; <0.1 mm, pl; plagioclase, ol; olivine, cpx; clinopyroxene, ore; opaque minerals, epi; epidote.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
987	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Average compositions of the representative analyses and structural formulae for olivines in Chenjabong basalt. FeOT as total Fe, Mg#=Mg/(Mg+Fe2+), Abbreviation: P; phenocryst, G; groundmass, C; core, M; margin.	미상	EPMA, ICP-MS, XRF	Average compositions of the representative analyses and structural formulae for olivines in Chenjabong basalt. FeOT as total Fe, Mg#=Mg/(Mg+Fe2+), Abbreviation: P; phenocryst, G; groundmass, C; core, M; margin.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
988	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Average compositions of the representative analyses and structural formulae for plagioclase. FeOT as total Fe. CA; Cheonjabong andesite, CBA; Cheonjabong basaltic andesite, SA; Sirubong andesite, CB; Cheonjabong basalt. Other abbreviations are the same as Table 3.	미상	EPMA, ICP-MS, XRF	Average compositions of the representative analyses and structural formulae for plagioclase. FeOT as total Fe. CA; Cheonjabong andesite, CBA; Cheonjabong basaltic andesite, SA; Sirubong andesite, CB; Cheonjabong basalt. Other abbreviations are the same as Table 3.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
989	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Average compositions of the representative analyses and structural formulae for pyroxenes. FeOT as total Fe. Abbreviations are the same as Table 4.	미상	EPMA, ICP-MS, XRF	Average compositions of the representative analyses and structural formulae for pyroxenes. FeOT as total Fe. Abbreviations are the same as Table 4.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
990	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Major elements (wt.%) and CIPW normative mineral compositions for basalt and andesitic rocks in the study area. Abbreviations are the same as Table 4.	미상	EPMA, ICP-MS, XRF	Major elements (wt.%) and CIPW normative mineral compositions for basalt and andesitic rocks in the study area. Abbreviations are the same as Table 4.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
991	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	Trance element abundances (ppm) for basalt and andesitic rocks in the study area. Abbriviations are the same as Table 4.	미상	EPMA, ICP-MS, XRF	Trance element abundances (ppm) for basalt and andesitic rocks in the study area. Abbriviations are the same as Table 4.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
992	C-8/9/12/13-1/14/16, J-1/2/3/6/6-1, GA9-1/9-2/10-1, GA-7/9	REE abundances (ppm) for basalt and andesitic rocks in the study area. Abbriviations are the same as Table 4.	미상	EPMA, ICP-MS, XRF	REE abundances (ppm) for basalt and andesitic rocks in the study area. Abbriviations are the same as Table 4.	진해 천자봉-시루봉 일원에 분포하는 마이오세 화산암 (1): 암석기재와 암석화학적 특징(암석학회지 Petrol_v17n2p108)	35.166667 128.691667; 35.166667 128.858333; 35.086111 128.858333; 35.086111 128.691667
993	A-8/5, 81602, 100409	Geologic map of the study area modified after Park et al.(1997). ①: Otanri, ②: Guwoonri, ③: Nolgimol, ④: Seoijiri. IB: Imjingang Belt; GM: Gyeonggi Massif; OB: Okcheon Belt; YM: Yeongnam Massif; GB: Gyeongsang Basin	미상	EPMA, EDS	Geologic map of the study area modified after Park et al.(1997). ①: Otanri, ②: Guwoonri, ③: Nolgimol, ④: Seoijiri. IB: Imjingang Belt; GM: Gyeonggi Massif; OB: Okcheon Belt; YM: Yeongnam Massif; GB: Gyeongsang	화천 구운리와 춘천 오타리 일대에 분포하는 각섬석 반려암체내에 존재하는 각섬석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
994	A-8/5, 81602, 100409	Detailed geologic map showing distribution of hornblende gabbro - diorite Complex in Otanri, Chuncheon, and in Guwoonri, Hwacheon. Sag: subspherical amphibole gabbro; Pag: prismatic amphibole gabbro.	미상	EPMA, EDS	Detailed geologic map showing distribution of hornblende gabbro - diorite Complex in Otanri, Chuncheon, and in Guwoonri, Hwacheon. Sag: subspherical amphibole gabbro; Pag: prismatic amphibole gabbro.	화천 구운리와 춘천 오탄리 일대에 분포하는 각섬석 반러암체내에 존재하는 각섬석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
995	A-8/5, 81602, 100409	Photomicrographs of amphibole phenocryst of subrounded shape in cross section in subspherical amphibole gabbro(A) and prismatic amphibole in prismatic amphibole gabbro (B) in Guwoonri, Hwacheon, which are taken by plane polarized light(A). Both subspherical amphibole phenocryst and prismatic amphibole consist of two distinct amphiboles showing different color and pleochroism, respectively. The bright parts in subspherical amphibole phenocryst show reaction rim as well as domain texture(A), and prismatic amphibole crystal shows domain texture(B). Amp: amphibole, Pl: plagioclase, Sp: sphene, Bp: bright part in amphibole.	미상	EPMA, EDS	Photomicrographs of amphibole phenocryst of subrounded shape in cross section in subspherical amphibole gabbro(A) and prismatic amphibole in prismatic amphibole gabbro (B) in Guwoonri, Hwacheon, which are taken by plane polarized light(A). Both subspherical amphibole phenocryst and prismatic amphibole consist of two distinct amphiboles showing different color and pleochroism, respectively. The bright parts in subspherical amphibole phenocryst show reaction rim as well as domain texture(A), and prismatic amphibole crystal shows domain texture(B). Amp: amphibole, Pl: plagioclase, Sp: sphene, Bp: bright part	화천 구운리와 춘천 오탄리 일대에 분포하는 각섬석 반러암체내에 존재하는 각섬석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
996	A-8/5, 81602, 100409	Back scattered image (B) of subspherical amphibole in subspherical amphibole gabbro (Sag) in Guwoonri, Hwacheon. The bright parts in back scattered electron image(B) represent Group 1 described in text. The dark parts in back scattered electron image(B) represent Group 2 described in text. Pl: plagioclase.	미상	EPMA, EDS	Back scattered image (B) of subspherical amphibole in subspherical amphibole gabbro (Sag) in Guwoonri, Hwacheon. The bright parts in back scattered electron image(B) represent Group 1 described in text. The dark parts in back scattered electron image(B) represent Group 2 described in text. Pl: plagioclase.	화천 구운리와 춘천 오탄리 일대에 분포하는 각섬석 반러암체내에 존재하는 각섬석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
997	A-8/5, 81602, 100409	Classification of the calcic amphiboles of the study area (Leake et. al., 1997). SA-bp: bright part at the back scattered electron image of subspherical amphibole phenocryst in subspherical amphibole gabbro(Sag), PA-bp: bright part at the back scattered electron image of prismatic amphibole in prismatic amphibole gabbro (Pag).	미상	EPMA, EDS	Classification of the calcic amphiboles of the study area (Leake et. al., 1997). SA-bp: bright part at the back scattered electron image of subspherical amphibole phenocryst in subspherical amphibole gabbro(Sag), PA-bp: bright part at the back scattered electron image of prismatic amphibole in prismatic amphibole gabbro (Pag).	화천 구운리와 춘천 오탄리 일대에 분포하는 각섬석 반러암체내에 존재하는 각섬석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
998	A-8/5, 81602, 100409	Classification of the calcic amphiboles of the study area(Leake et. al., 1997). SA-dp: dark part at the back scattered electron image of subspherical amphibole phenocryst in subspherical amphibole gabbro (Sag), PA-dp: dark part at the back scattered electron image of prismatic amphibole in prismatic amphibole gabbro (Pag).	미상	EPMA, EDS	Classification of the calcic amphiboles of the study area(Leake et. al., 1997). SA-dp: dark part at the back scattered electron image of subspherical amphibole phenocryst in subspherical amphibole gabbro (Sag), PA-dp: dark part at the back scattered electron image of prismatic amphibole in prismatic amphibole gabbro (Pag).	화천 구운리와 춘천 오탄리 일대에 분포하는 각섬석 반러암체내에 존재하는 각섬석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
999	A-8/5, 81602, 100409	Plot of Aliv vs Mg/(Mg+Fe2+) for subspherical and prismatic amphiboles hornblende gabbro in the study area. Subspherical amphiboles have higher value in Mg/(Mg+Fe2+) ratio regardless of amphibole species, which is suggestive of the conversion of subspherical amphibole phenocryst from pyroxene. Abbreviations are the same as those in Fig. 6 and 7.	미상	EPMA, EDS	Plot of Aliv vs Mg/(Mg+Fe2+) for subspherical and prismatic amphiboles hornblende gabbro in the study area. Subspherical amphiboles have higher value in Mg/(Mg+Fe2+) ratio regardless of amphibole species, which is suggestive of the conversion of subspherical amphibole phenocryst from pyroxene. Abbreviations are the same as those in Fig. 6 and 7.	화천 구운리와 춘천 오탄리 일대에 분포 하는 각섬석 반력암체내에 존재하는 각섬 석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1000	A-8/5, 81602, 100409	Plot of Al[iv] vs Cr2O3(wt.%) for subspherical and prismatic amphiboles in hornblende gabbro in the study area. Cr content in amphibole is higher in subspherical amphibole than in prismatic amphibole regardless of amphibole species, which indicates that subspherical amphibole phenocryst was converted from pyroxene compatible with Cr. Abbreviations are the same as those in Fig. 6 and 7.	미상	EPMA, EDS	Plot of Al[iv] vs Cr2O3(wt.%) for subspherical and prismatic amphiboles in hornblende gabbro in the study area. Cr content in amphibole is higher in subspherical amphibole than in prismatic amphibole regardless of amphibole species, which indicates that subspherical amphibole phenocryst was converted from pyroxene compatible with Cr. Abbreviations are the same as those in Fig. 6 and 7.	화천 구운리와 춘천 오탄리 일대에 분포 하는 각섬석 반력암체내에 존재하는 각섬 석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1001	A-8/5, 81602, 100409	$\delta^{18}\text{O}$ amphibole vs. $\delta^{18}\text{O}$ plagioclase. Heavy $\delta^{18}\text{O}$ values of amphibole and plagioclase separated from hornblende gabbro and plot of $\delta^{18}\text{O}$ values along the isotherm suggest that hornblende gabbro has experienced oxygen isotopic exchange with a relatively heavy- ^{18}O fluid of magmatic origin for a long period.	미상	EPMA, EDS	$\delta^{18}\text{O}$ amphibole vs. $\delta^{18}\text{O}$ plagioclase. Heavy $\delta^{18}\text{O}$ values of amphibole and plagioclase separated from hornblende gabbro and plot of $\delta^{18}\text{O}$ values along the isotherm suggest that hornblende gabbro has experienced oxygen isotopic exchange with a relatively heavy- ^{18}O fluid of magmatic origin for a long	화천 구운리와 춘천 오탄리 일대에 분포 하는 각섬석 반력암체내에 존재하는 각섬 석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1002	A-8/5, 81602, 100409	Representative electron microprobe analysis(in wt.%) of amphiboles from the hornblende gabbro in Guwoonri, Hwacheon and in Otanri, Chuncheon	미상	EPMA, EDS	Representative electron microprobe analysis(in wt.%) of amphiboles from the hornblende gabbro in Guwoonri, Hwacheon and in Otanri, Chuncheon	화천 구운리와 춘천 오탄리 일대에 분포 하는 각섬석 반력암체내에 존재하는 각섬 석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1003	A-8/5, 81602, 100409	Oxygen isotopic compositions of amphibole and plagioclase separated from hornblende gabbro(‰, V-SMOW) in the study area.	미상	EPMA, EDS	Oxygen isotopic compositions of amphibole and plagioclase separated from hornblende gabbro(‰, V-SMOW) in the study area.	화천 구운리와 춘천 오탄리 일대에 분포 하는 각섬석 반력암체내에 존재하는 각섬 석류의 산출양상 및 생성작용(암석학회지 Petrol_v18n2p077)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1004	lj-1~4	Geological map of the study area (Modified from Hwang et al., 2004).	미상	XRF, ICP-MS	Geological map of the study area (Modified from Hwang et al., 2004).	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1005	lj-1~4	Photomicrographs showing characteristic textures of micrographic granite in the study area: closed nicol (a), open nicol (b) of the previous picture, micrographic and perthitic textures (c): closed nicol and open nicol of the previous picture, c (d). Q: quartz, Kf: K-feldspar, Bt: biotite, Op: opaque mineral.	미상	XRF, ICP-MS	Photomicrographs showing characteristic textures of micrographic granite in the study area: closed nicol (a), open nicol (b) of the previous picture, micrographic and perthitic textures (c): closed nicol and open nicol of the previous picture, c (d). Q: quartz, Kf: K-feldspar, Bt: biotite, Op: opaque	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1006	Ij-1~4	Photomicrographs showing characteristic textures of micrographic granite in the study area micrographic textures: closed nicol (×20) (a), open nicol of the previous picture, a (b), fine grained granite textures: closed nicol (c) and open nicol of the previous picture, c (d). Q: quartz, Kf: K-feldspar, Bt: biotite, Op: opaque mineral.	미상	XRF, ICP-MS	Photomicrographs showing characteristic textures of micrographic granite in the study area micrographic textures: closed nicol (×20) (a), open nicol of the previous picture, a (b), fine grained granite textures: closed nicol (c) and open nicol of the previous picture, c (d). Q: quartz, Kf: K-feldspar, Bt: biotite, Op: opaque mineral.	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1007	Ij-1~4	Q-A-P diagram of the granitic rocks in the study area (Streckeisen, 1977). Symbols: red triangle, IJ-1; yellow circle, IJ-2; green diamond, IJ-3; blue square, IJ-4.	미상	XRF, ICP-MS	Q-A-P diagram of the granitic rocks in the study area (Streckeisen, 1977). Symbols: red triangle, IJ-1; yellow circle, IJ-2; green diamond, IJ-3; blue square, IJ-4.	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1008	Ij-1~4	AFM and TAS diagrams of the micrographic granite in the study area. Symbols are same as those in Fig. 4.	미상	XRF, ICP-MS	AFM and TAS diagrams of the micrographic granite in the study area. Symbols are same as those in Fig. 4.	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1009	Ij-1~4	(a) Normative Q-Ab-Or triangular diagram showing presumption of pressure and (b) isobaric equilibrium diagram of the system Q-Ab-Or showing presumption of emprature in 1kb pressure (Tuttle and Bowen, 1958). Symbols and abbreviations are the same as those in Fig. 5.	미상	XRF, ICP-MS	(a) Normative Q-Ab-Or triangular diagram showing presumption of pressure and (b) isobaric equilibrium diagram of the system Q-Ab-Or showing presumption of emprature in 1kb pressure (Tuttle and Bowen, 1958). Symbols and abbreviations are the same	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1010	Ij-1~4	Gradual stages for the development of gnamma, a→b→c process of change in a miarolitic cavity.	미상	XRF, ICP-MS	Gradual stages for the development of gnamma, a→b→c process of change in a miarolitic cavity.	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1011	Ij-1~4	Characteristic features of microlandform at Ijin-ri type of Pan (a), type of pit (b), fluting core (c) and raised rim by differential erosion(d).	미상	XRF, ICP-MS	Characteristic features of microlandform at Ijin-ri type of Pan (a), type of pit (b), fluting core (c) and raised rim by differential erosion(d).	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1012	Ij-1~4	Topographic features related to magmatism micrographic granite - A (external zone), micrographic granite - B (internal zone).	미상	XRF, ICP-MS	Topographic features related to magmatism micrographic granite - A (external zone), micrographic granite - B (internal zone).	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1013	Ij-1~4	Modal compositions of the micrographic granite in the study area	미상	XRF, ICP-MS	Modal compositions of the micrographic granite in the study area	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1014	Ij-1~4	Major element oxides(wt.%) and CIPW normative minerals of the micrographic granite in the study area	미상	XRF, ICP-MS	Major element oxides(wt.%) and CIPW normative minerals of the micrographic granite in the study area	울산 이진리 미문상화강암의 암석학적 및 지형학적 특성 연구(암석학회지 Petrol_v18n3p211)	35.438778 129.355833; 35.438778 129.371556; 35.423861 129.371556; 35.423861 129.355833
1015	DKH19/19-1/19-2	Geological map of the Shinri area near Yedang Lake, eastern part of the Hongseong area.	미상	EPMA, ICP-MS	Geological map of the Shinri area near Yedang Lake, eastern part of the Hongseong area.	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1016	DKH19/19-1/19-2	X-ray mapping image, photomicrograph, and compositional profile of a garnet from Shinri garnet-bearing metabasites. Abbreviations: Xalm, almandine; Xgrs, grossular; Xprp, pyrope; Xsps, spessartine.	미상	EPMA, ICP-MS	X-ray mapping image, photomicrograph, and compositional profile of a garnet from Shinri garnet-bearing metabasites. Abbreviations: Xalm, almandine; Xgrs, grossular; Xprp, pyrope; Xsps, spessartine.	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1017	DKH19/19-1/19-2	Compositional diagram (Or-Ab-An) of feldspar from Shinri garnet-bearing metabasites.	미상	EPMA, ICP-MS	Compositional diagram (Or-Ab-An) of feldspar from Shinri garnet-bearing metabasites.	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1018	DKH19/19-1/19-2	Compositional trends of amphibole from Shinri garnet-bearing metabasites. (a) Si vs. Mg/(Mg+Fe) (b) AlVI + Fe3+ + Ti vs. Na (M4) and (c) 100*Al/(Al+Si) vs. 100*Na/(Na+Ca).	미상	EPMA, ICP-MS	Compositional trends of amphibole from Shinri garnet-bearing metabasites. (a) Si vs. Mg/(Mg+Fe) (b) AlVI + Fe3+ + Ti vs. Na (M4) and (c) 100*Al/(Al+Si) vs. 100*Na/(Na+Ca).	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1019	DKH19/19-1/19-2	Classification for Neoproterozoic Shinri, Bibong and Baekdong garnet-bearing metabasites. according to (a) Na2O+K2O vs. SiO2, (b) AFM and (c) Zr/TiO2 vs. Nb/Y diagrams.	미상	EPMA, ICP-MS	Classification for Neoproterozoic Shinri, Bibong and Baekdong garnet-bearing metabasites. according to (a) Na2O+K2O vs. SiO2, (b) AFM and (c) Zr/TiO2 vs. Nb/Y diagrams.	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1020	DKH19/19-1/19-2	Chondrite-normalized and Primitive-mantle-normalized (Sun and McDonough, 1989) trace element patterns for Neoproterozoic Shinri, Bibong and Baekdong garnet-bearing metabasites.	미상	EPMA, ICP-MS	Chondrite-normalized and Primitive-mantle-normalized (Sun and McDonough, 1989) trace element patterns for Neoproterozoic Shinri, Bibong and Baekdong garnet-bearing	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1021	DKH19/19-1/19-2	Compositional data for Neoproterozoic Shinri, Bibong and Baekdong garnet-bearing metabasites plotted on the (a) Zr-Nb-Y, (b) Zr/Y vs. Zr, (c) Zr-Ti-Y and (d) V vs. Ti tectonic discrimination diagrams. For abbreviations in the Zr-Nb-Y diagram: Al, within-plate alkali basalts; All, within-plate alkali basalts and within-plate tholeiites; B, E-type MORB; C, within-plate tholeiites and volcanic-arc basalts; D, N-type MORB and volcanic-arc basalts. For abbreviations in the Zr-Ti-Y diagram: IAT, island-arc tholeiites; MORB, mid ocean ridge basalt; CAB, calc-alkaline basalts; WPB, within-plate basalts. For abbreviations in the Zr vs. Zr/Y and V vs. Ti diagrams: IAT, island-arc tholeiites; MORB, mid oceanic ridge basalt; BAB, back-arc basin basalt; WPB, within-plate basalt; CAB, Calc-alkaline basalt; CFB, continental flood basalt; OIB, oceanic island basalt; AB, alkali basalt.	미상	EPMA, ICP-MS	Compositional data for Neoproterozoic Shinri, Bibong and Baekdong garnet-bearing metabasites plotted on the (a) Zr-Nb-Y, (b) Zr/Y vs. Zr, (c) Zr-Ti-Y and (d) V vs. Ti tectonic discrimination diagrams. For abbreviations in the Zr-Nb-Y diagram: Al, within-plate alkali basalts; All, within-plate alkali basalts and within-plate tholeiites; B, E-type MORB; C, within-plate tholeiites and volcanic-arc basalts; D, N-type MORB and volcanic-arc basalts. For abbreviations in the Zr-Ti-Y diagram: IAT, island-arc tholeiites; MORB, mid ocean ridge basalt; CAB, calc-alkaline basalts; WPB, within-plate basalts. For abbreviations in the Zr vs. Zr/Y and V vs. Ti diagrams: IAT, island-arc tholeiites; MORB, mid oceanic ridge basalt; BAB, back-arc basin basalt; WPB, within-plate basalt; CAB, Calc-alkaline basalt; CFB, continental flood basalt; OIB, oceanic	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1022	DKH19/19-1/19-2	Inferred metamorphic P-T conditions and P-T paths for Shinri garnet-bearing metabasites. The petrogenetic grid used was that of Liou et al.(1999). BS: blueschist facies; GS: greenschist facies; EA: epidote-amphibolite facies; AM: amphibolite facies; EG: eclogite facies; HGR: high-pressure granulite facies; GR: granulite facies.	미상	EPMA, ICP-MS	Inferred metamorphic P-T conditions and P-T paths for Shinri garnet-bearing metabasites. The petrogenetic grid used was that of Liou et al.(1999). BS: blueschist facies; GS: greenschist facies; EA: epidote-amphibolite facies; AM: amphibolite facies; EG: eclogite facies; HGR: high-pressure granulite facies; GR: granulite facies.	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1023	DKH19/19-1/19-2	Representative microprobe analyses of garnet in garnet-bearing metabasite of the Sinri area	미상	EPMA, ICP-MS	Representative microprobe analyses of garnet in garnet-bearing metabasite of the Sinri area	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1024	DKH19/19-1/19-2	Representative microprobe analyses of plagioclase in garnet-bearing metabasite of the Sinri area	미상	EPMA, ICP-MS	Representative microprobe analyses of plagioclase in garnet-bearing metabasite of the Sinri area	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1025	DKH19/19-1/19-2	Representative microprobe analyses of amphibole in garnet-bearing metabasite of the Sinri area	미상	EPMA, ICP-MS	Representative microprobe analyses of amphibole in garnet-bearing metabasite of the Sinri area	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1026	DKH19/19-1/19-2	Major and trace element analyses of Shinri metabasites	미상	EPMA, ICP-MS	Major and trace element analyses of Shinri metabasites	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1027	DKH19/19-1/19-2	Representative garnet and inclusion compositional data used in the geothermobarometries	미상	EPMA, ICP-MS	Representative garnet and inclusion compositional data used in the geothermobarometries	홍성 신리 지역 대리암 내 함석류석 변성 염기성암의 암석지화학 연구 및 그 지구 조적 의미(암석학회지 Petrol_v19n3p209)	36.631025 126.755511; 36.631025 126.797917; 36.594981 126.797917; 36.594981 126.755511
1028	OD100205-1/2	(a) Simplified geologic map of Korean Peninsula and (b) Simplified tectonic map and metamorphic trend along the Dabie-Hongseong collision belt (modified after Oh and kusk, 2007). Westward along the DabieHongseong collision belt, the metamorphism changes from UHT (ultrahigh-temperature metamorphism, stars) to HP (high-pressure metamorphism, square) and UHP (ultrahigh-pressure metamorphism, circle). Abbreviations: KM, Kwanmo Massif; NM, Nangrim Massif; PB, Pyeongnam Basin; IB, Imjingang belt; GM, Gyeonggi Massif; OMB, Okcheon metamorphic belt; TB, Taebaeksan Basin; YM, Youngnam Massif; GB, Gyeongsang Basin.	미상	EPMA, SHRIMP	(a) Simplified geologic map of Korean Peninsula and (b) Simplified tectonic map and metamorphic trend along the Dabie-Hongseong collision belt (modified after Oh and kusk, 2007). Westward along the DabieHongseong collision belt, the metamorphism changes from UHT (ultrahigh-temperature metamorphism, stars) to HP (high-pressure metamorphism, square) and UHP (ultrahigh-pressure metamorphism, circle). Abbreviations: KM, Kwanmo Massif; NM, Nangrim Massif; PB, Pyeongnam Basin; IB, Imjingang belt; GM, Gyeonggi Massif; OMB, Okcheon metamorphic belt; TB, Taebaeksan Basin; YM, Youngnam	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1029	OD100205-1/2	Simplified geologic map of the Odaesan Area (modified after Oh et al., 2006a) with simplified tectonic map of northeast Asia. Abbreviations: HS, Hongseong area; ODS, Odaesan area. Other abbreviations are the same as those used in Figure 1.	미상	EPMA, SHRIMP	Simplified geologic map of the Odaesan Area (modified after Oh et al., 2006a) with simplified tectonic map of northeast Asia. Abbreviations: HS, Hongseong area; ODS, Odaesan area. Other abbreviations are the same as	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1030	OD100205-1/2	(a) Photograph of the outcrop showing gabbro enclaves within the Odaesan mangerite and leucocratic lenses with K-feldspar in the gabbro enclaves. (b) Photograph of outcrop showing irregular boundary between the mangerite and gabbro. (c) Photomicrograph of the Odaesan mangerite showing biotite(Bt) inclusions in amphibole(Amp). (d) Photomicrograph of the Odaesan gabbro showing acicular apatite(Ap) inclusions in plagioclase(Pl).	미상	EPMA, SHRIMP	(a) Photograph of the outcrop showing gabbro enclaves within the Odaesan mangerite and leucocratic lenses with K-feldspar in the gabbro enclaves. (b) Photograph of outcrop showing irregular boundary between the mangerite and gabbro. (c) Photomicrograph of the Odaesan mangerite showing biotite(Bt) inclusions in amphibole(Amp). (d) Photomicrograph of the Odaesan gabbro showing acicular apatite(Ap)	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1031	OD100205-1/2	Chemical compositions of the minerals in the Odaesan mangerite and gabbro. (a) Compositions of pyroxenes plotted in the Wo-En-Fs ternary diagram. (b) Compositions of feldspars plotted in the Or-Ab-An ternary diagram. (c) Compositions of amphibole plotted in the Mg/(Mg+Fe2+) vs. Si diagram, complied by Leake (1978). (d) Classification of biotite in the Al(IV) vs. Fe/(Fe+Mg) diagram.	미상	EPMA, SHRIMP	Chemical compositions of the minerals in the Odaesan mangerite and gabbro. (a) Compositions of pyroxenes plotted in the Wo-En-Fs ternary diagram. (b) Compositions of feldspars plotted in the Or-Ab-An ternary diagram. (c) Compositions of amphibole plotted in the Mg/(Mg+Fe2+) vs. Si diagram, complied by Leake (1978). (d) Classification of biotite in the Al(IV) vs. Fe/(Fe+Mg) diagram.	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1032	OD100205-1/2	(a) Back scattered electron image of plagioclase in the Odaesan mangerite with the analyzed positions (circles). (b) Variation in plagioclase composition.	미상	EPMA, SHRIMP	(a) Back scattered electron image of plagioclase in the Odaesan mangerite with the analyzed positions (circles). (b) Variation in plagioclase composition.	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1033	OD100205-1/2	Geochemical classification of the mangerite and gabbro in the Odaesan area and granitoids in the Ian (Cho et al., 2008) and Daegang (Kim et al., 1998) areas using (a) Total alkalis vs. silica (TAS) diagram (after Cox et al., 1979; Wilson, 1989), (b) A/NK vs. A/CNK diagram (after Maniar and Piccoli, 1989), A=Al ₂ O ₃ , N=Na ₂ O, K=K ₂ O, and C=CaO (molar), Chappell and White (1974) classified I- and S-type granites, (c) Total alkalis vs. silica diagram, (d) AFM diagram illustrating the dominant calc-alkaline nature of the Odaesan plutonic rocks, the boundary between tholeiite and calc-alkaline series is from Irvine and Baragar (1971), (e) Subdivision of subalkalic rocks based on the K ₂ O vs. SiO ₂ diagram (after Peccerillo and Taylor, 1976), (f) Rb-Sr-Ba ternary diagram for high and low Ba-Sr granite fields, after Tarney and Jones (1994).	미상	EPMA, SHRIMP	Geochemical classification of the mangerite and gabbro in the Odaesan area and granitoids in the Ian (Cho et al., 2008) and Daegang (Kim et al., 1998) areas using (a) Total alkalis vs. silica (TAS) diagram (after Cox et al., 1979; Wilson, 1989), (b) A/NK vs. A/CNK diagram (after Maniar and Piccoli, 1989), A=Al ₂ O ₃ , N=Na ₂ O, K=K ₂ O, and C=CaO (molar), Chappell and White (1974) classified I- and S-type granites, (c) Total alkalis vs. silica diagram, (d) AFM diagram illustrating the dominant calc-alkaline nature of the Odaesan plutonic rocks, the boundary between tholeiite and calc-alkaline series is from Irvine and Baragar (1971), (e) Subdivision of subalkalic rocks based on the K ₂ O vs. SiO ₂ diagram (after Peccerillo and Taylor, 1976), (f) Rb-Sr-Ba ternary diagram for high and low Ba-Sr granite	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1034	OD100205-1/2	The discrimination of tectonic settings for the mangerite and gabbro in the Odaesan area and granitoids in the Ian (Cho et al., 2008), and Daegang (Kim et al., 1998) areas using (a) Zr/Y vs. Zr diagram (after Pearce and Norry, 1979), (b) Zr-Nb-Y discrimination diagram (after Meschede, 1986), the fields are defined as follows: AI, within-plate alkali basalts; All, within-plate alkali basalts and within-plate tholeiites; B, E-type MORB; C, within-plate tholeiites and volcanic-arc basalts; D, N-type MORB and volcanic-arc basalts, the plotting coordinates for the boundary lines given by Meschede (1986), (c) Y+Nb vs. Rb diagram, after Pearce et al. (1984) and Pearce (1996), (d) SiO ₂ (wt.%) vs. Rb/Zr diagram (Harris et al., 1986). Symbols are the same as in Fig. 7.	미상	EPMA, SHRIMP	The discrimination of tectonic settings for the mangerite and gabbro in the Odaesan area and granitoids in the Ian (Cho et al., 2008), and Daegang (Kim et al., 1998) areas using (a) Zr/Y vs. Zr diagram (after Pearce and Norry, 1979), (b) Zr-Nb-Y discrimination diagram (after Meschede, 1986), the fields are defined as follows: AI, within-plate alkali basalts; All, within-plate alkali basalts and within-plate tholeiites; B, E-type MORB; C, within-plate tholeiites and volcanic-arc basalts; D, N-type MORB and volcanic-arc basalts, the plotting coordinates for the boundary lines given by Meschede (1986), (c) Y+Nb vs. Rb diagram, after Pearce et al. (1984) and Pearce (1996), (d) SiO ₂ (wt.%) vs. Rb/Zr diagram (Harris et al., 1986). Symbols	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1035	OD100205-1/2	Cr vs. Ni binary diagram for the mangerite and gabbro in the Odaesan area. The expected range of Ni and Cr relationships is from Tsuchiya et al. (2005). Symbols are the same as in Fig. 7.	미상	EPMA, SHRIMP	Cr vs. Ni binary diagram for the mangerite and gabbro in the Odaesan area. The expected range of Ni and Cr relationships is from Tsuchiya et al. (2005). Symbols are the same as in Fig.	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1036	OD100205-1/2	REE and spider diagrams for the mangerite and gabbro. (a) Chondrite-normalized (Sun and McDonough, 1989) rare earth element (REE) patterns. (b) Primitive mantle-normalized (Sun and McDonough, 1989) trace element distribution diagrams. Symbols are the same as in Fig. 7.	미상	EPMA, SHRIMP	REE and spider diagrams for the mangerite and gabbro. (a) Chondrite-normalized (Sun and McDonough, 1989) rare earth element (REE) patterns. (b) Primitive mantle-normalized (Sun and McDonough, 1989) trace element distribution diagrams. Symbols are the same as in Fig. 7.	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1037	OD100205-1/2	Cathodoluminescence (CL) images of sectioned zircon grains and analyzed positions with $^{206}\text{Pb}/^{238}\text{U}$ ages for (a) Mangerite and (b) Gabbro.	미상	EPMA, SHRIMP	Cathodoluminescence (CL) images of sectioned zircon grains and analyzed positions with $^{206}\text{Pb}/^{238}\text{U}$ ages for (a) Mangerite and (b) Gabbro.	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1038	OD100205-1/2	Concordia plots of SHRIMP U-Pb isotopic analyses of zircons from (a) Mangerite and (b) Gabbro in the Odaesan area	미상	EPMA, SHRIMP	Concordia plots of SHRIMP U-Pb isotopic analyses of zircons from (a) Mangerite and (b) Gabbro in the Odaesan area	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1039	OD100205-1/2	The distribution of Triassic plutonic rocks in South Korea. Abbreviations are the same as those used in Fig. 1. Ages for Triassic plutonic rocks were obtained from the following sources: Sagong et al., 2005; Cho et al., 2008; Choi et al., 2008; Peng et al., 2008; Williams et al., 2009; Park, 2009; Seo et al., 2010; Lee and Oh, 2010; this study.	미상	EPMA, SHRIMP	The distribution of Triassic plutonic rocks in South Korea. Abbreviations are the same as those used in Fig. 1. Ages for Triassic plutonic rocks were obtained from the following sources: Sagong et al., 2005; Cho et al., 2008; Choi et al., 2008; Peng et al., 2008; Williams et al., 2009; Park, 2009; Seo et al., 2010; Lee and Oh, 2010; this study.	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1040	OD100205-1/2	Tectonic model of the evolution of the Hongseong area (modified after Seo et al., 2010). (a) Subduction stage before continental collision. Water and crustal elements were supplied to the lithospheric mantle from the subducted oceanic crust and sediments. As a result, lithospheric mantle was enriched with water and crustal elements. (b) During the final stages of collision, the oceanic slab broke off from the continental slab, making an opening between the continental and oceanic slabs. The heat of the asthenosphere supplied through this opening to the lithospheric mantle. Partial melting of the lithospheric mantle occurred in response to heat derived from the asthenosphere and formed gabbroic magma which underplated the lower crust. (c) The opening became wider resulting more heat supply from the asthenosphere. As a result, the underplated gabbro was partially melted to produce shoshonitic mangeritic magma. The mangeritic magma intruded the crust together with gabbroic magma formed by partial melting of lithospheric mantle. In some places of the crust, these two magmas mingle together.	미상	EPMA, SHRIMP	Tectonic model of the evolution of the Hongseong area (modified after Seo et al., 2010). (a) Subduction stage before continental collision. Water and crustal elements were supplied to the lithospheric mantle from the subducted oceanic crust and sediments. As a result, lithospheric mantle was enriched with water and crustal elements. (b) During the final stages of collision, the oceanic slab broke off from the continental slab, making an opening between the continental and oceanic slabs. The heat of the asthenosphere supplied through this opening to the lithospheric mantle. Partial melting of the lithospheric mantle occurred in response to heat derived from the asthenosphere and formed gabbroic magma which underplated the lower crust. (c) The opening became wider resulting more heat supply from the asthenosphere. As a result, the underplated gabbro was partially melted to produce shoshonitic mangeritic magma. The mangeritic magma intruded the crust together with gabbroic magma formed by partial	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1041	OD100205-1/2	Representative chemical compositions of clinopyroxenes and orthopyroxenes in the mangerite and gabbro	미상	EPMA, SHRIMP	Representative chemical compositions of clinopyroxenes and orthopyroxenes in the mangerite and gabbro	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1042	OD100205-1/2	Representative chemical compositions of feldspars in the mangerite and gabbro	미상	EPMA, SHRIMP	Representative chemical compositions of feldspars in the mangerite and gabbro	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1043	OD100205-1/2	Representative chemical compositions of amphiboles and biotites in the mangerite and gabbro	미상	EPMA, SHRIMP	Representative chemical compositions of amphiboles and biotites in the mangerite and gabbro	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1044	OD100205-1/2	Whole rock compositions of representative mangerites and gabbros in the Odaesan area	미상	EPMA, SHRIMP	Whole rock compositions of representative mangerites and gabbros in the Odaesan area	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167
1045	OD100205-1/2	SHRIMP U-Pb zircon data from the mangerite and gabbro in the Odaesan area	미상	EPMA, SHRIMP	SHRIMP U-Pb zircon data from the mangerite and gabbro in the Odaesan area	오대산 지역에 나타나는 맨거라이트와 반려암의 특징과 트라이아스기 한반도 지체 구조 해석에 대한 의미(암석학회지 Petrol_v20n2p077)	37.871639 128.297972 37.871611 128.309167

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1046	M80/100/10	Geological and dyke distribution maps of the Jukbyeon-Bugu area (modified from Lee et al., 1993).	미상	ICP-MS, XRF	Geological and dyke distribution maps of the Jukbyeon-Bugu area (modified from Lee et al., 1993).	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1047	M80/100/10	(A) Rose diagram and (B) stereographic projection showing the attitudes of mafic to intermediate dykes and of acidic dykes, respectively. The mafic to intermediate dykes are classified into three groups, based on their orientations.	미상	ICP-MS, XRF	(A) Rose diagram and (B) stereographic projection showing the attitudes of mafic to intermediate dykes and of acidic dykes, respectively. The mafic to intermediate dykes are classified into three groups, based on their	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1048	M80/100/10	Rose diagram showing the classification of joints based on their orientations.	미상	ICP-MS, XRF	Rose diagram showing the classification of joints based on their orientations.	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1049	M80/100/10	Schematic outcrop sketch (A) and outcrop photographs (B~F) showing the relative chronologies among the dyke and joint groups.	미상	ICP-MS, XRF	Schematic outcrop sketch (A) and outcrop photographs (B~F) showing the relative chronologies among the dyke and joint groups.	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1050	M80/100/10	Schematic outcrop sketch (A) and outcrop photographs (B~D) showing the relative chronologies among the dyke and joint groups.	미상	ICP-MS, XRF	Schematic outcrop sketch (A) and outcrop photographs (B~D) showing the relative chronologies among the dyke and joint groups.	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1051	M80/100/10	Outcrop photographs (A, C) and schematic outcrop sketch (B) showing the injection types of M-80 and M-100 (D) as well as the orientation of horizontal minimum stress (yellow arrow). Note the variation of width of dykes about their orientation in the same stress field (E).	미상	ICP-MS, XRF	Outcrop photographs (A, C) and schematic outcrop sketch (B) showing the injection types of M-80 and M-100 (D) as well as the orientation of horizontal minimum stress (yellow arrow). Note the variation of width of dykes about their orientation in the	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1052	M80/100/10	Outcrop photograph indicating the passive injection of M-80 dyke. Its intrusion has been conducted along the preexisting J-80 and J-150 joints. A white arrow indicates the direction of minimum horizontal stress.	미상	ICP-MS, XRF	Outcrop photograph indicating the passive injection of M-80 dyke. Its intrusion has been conducted along the preexisting J-80 and J-150 joints. A white arrow indicates the direction of minimum horizontal stress.	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967

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1053	M80/100/10	Thin-section photomicrographs of mafic and felsic dykes (under crossed polars). (A) Photomicrograph of intersertal to subophitic textures in M-80 dyke with minerals of plagioclase (Pl), clinopyroxene (Cpx), and olivine (Ol). (B) Photomicrograph of inter-granular to subophitic textures in M-100 dyke with minerals of plagioclase (Pl), and clinopyroxene (Cpx). (C) Photomicrograph of vitrophyric textures in M-10 dyke with minerals of sieve-texture plagioclase (Pl), and clinopyroxene (Cpx). (D) Photomicrograph of porphyritic texture in felsic dyke with minerals of quartz (Qtz), and plagioclase (Pl).	미상	ICP-MS, XRF	Thin-section photomicrographs of mafic and felsic dykes (under crossed polars). (A) Photomicrograph of intersertal to subophitic textures in M-80 dyke with minerals of plagioclase (Pl), clinopyroxene (Cpx), and olivine (Ol). (B) Photomicrograph of inter-granular to subophitic textures in M-100 dyke with minerals of plagioclase (Pl), and clinopyroxene (Cpx). (C) Photomicrograph of vitrophyric textures in M-10 dyke with minerals of sieve-texture plagioclase (Pl), and clinopyroxene (Cpx). (D) Photomicrograph of porphyritic texture in felsic dyke with minerals of quartz	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1054	M80/100/10	(A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ for dykes in the study area (after Irvine and Baragar, 1971; Cox et al., 1979). (B) AFM diagram for dykes in the study area (after Irvine and Baragar, 1971).	미상	ICP-MS, XRF	(A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ for dykes in the study area (after Irvine and Baragar, 1971; Cox et al., 1979). (B) AFM diagram for dykes in the study area (after Irvine and Baragar, 1971).	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1055	M80/100/10	C1 chondrite normalized REE patterns (normalized data from Sun and McDough, 1989). Symbols are the same as those in Fig. 10.	미상	ICP-MS, XRF	C1 chondrite normalized REE patterns (normalized data from Sun and McDough, 1989). Symbols are the same as those in Fig. 10.	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1056	M80/100/10	N-type MORB normalized spider diagram for trace element (normalized data from Sun and McDough, 1989). Symbols are the same as those in Fig. 10.	미상	ICP-MS, XRF	N-type MORB normalized spider diagram for trace element (normalized data from Sun and McDough, 1989). Symbols are the same as those in Fig. 10.	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1057	M80/100/10	Matrix analysis of relative chronology of the dyke and joint groups in the study area. Left first column and top rank indicate their arbitrary relative chronological order	미상	ICP-MS, XRF	Matrix analysis of relative chronology of the dyke and joint groups in the study area. Left first column and top rank indicate their arbitrary relative chronological order	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1058	M80/100/10	Major (wt.%) and trace element abundances (ppm) of the dykes in the study area	미상	ICP-MS, XRF	Major (wt.%) and trace element abundances (ppm) of the dykes in the study area	한반도 동부 울진 죽변-부구 지역 암맥군과 단열계의 상대연령과 지구조적 의미 (암석학회지 Petrol_v20n4p173)	37.140856 129.262967; 37.140856 129.457806; 36.974436 129.457806; 36.974436 129.262967
1059	YH03/06	Tectonic and geological maps showing (a) tectonic units in East Asia; (b) distribution of sedimentary units in the western Gyeonggi massif; and (c) geological map in the study area showing sample locations. GM, Gyeonggi Massif; YM, Yeongnam Massif; and IB, Imjingang Belt.	PRAWN/LEAD 6.5.5, Isopot/EX	SHRIMP	Tectonic and geological maps showing (a) tectonic units in East Asia; (b) distribution of sedimentary units in the western Gyeonggi massif; and (c) geological map in the study area showing sample locations. GM, Gyeonggi Massif; YM, Yeongnam Massif;	경기육괴 북서부 영흥도-선재도-대부도에 분포하는 변성퇴적암 내 쇄설성 저어콘의 SHRIMP U-Pb 연대(암석학회지 Petrol_v21n1p031)	37.297222 126.411389; 37.297222 126.654167; 37.183889 126.654167; 37.183889 126.411389
1060	YH03/06	Photomicrographs of meta-sandstones from (a) sample YH03, and (b) sample YH06. Ms, muscovite; Bt, biotite; and Cal, calcite.	PRAWN/LEAD 6.5.5, Isopot/EX	SHRIMP	Photomicrographs of meta-sandstones from (a) sample YH03, and (b) sample YH06. Ms, muscovite; Bt, biotite; and Cal, calcite.	경기육괴 북서부 영흥도-선재도-대부도에 분포하는 변성퇴적암 내 쇄설성 저어콘의 SHRIMP U-Pb 연대(암석학회지 Petrol_v21n1p031)	37.297222 126.411389; 37.297222 126.654167; 37.183889 126.654167; 37.183889 126.411389

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1061	YH03/06	Cathodoluminescence images of zircon from (a) sample YH03, and (b) sample YH06. The sample and grain.spot numbers used in Table 1 are shown in each image. Ellipses denote the analytical spots of ion probe. The spot size is ~20 µm.	PRAWN/LEAD 6.5.5, Isopot/EX	SHRIMP	Cathodoluminescence images of zircon from (a) sample YH03, and (b) sample YH06. The sample and grain.spot numbers used in Table 1 are shown in each image. Ellipses denote the analytical spots of ion probe. The spot	경기육괴 북서부 영흥도-선재도-대부도에 분포하는 변성퇴적암 내 채설성 저어콘의 SHRIMP U-Pb 연대(암석학회지 Petrol_v21n1p031)	37.297222 126.411389; 37.297222 126.654167; 37.183889 126.654167; 37.183889 126.411389
1062	YH03/06	Tera-Wasserburg diagrams showing the spot analyses of zircon from (a) sample YH03, and (b) sample YH06.	PRAWN/LEAD 6.5.5, Isopot/EX	SHRIMP	Tera-Wasserburg diagrams showing the spot analyses of zircon from (a) sample YH03, and (b) sample YH06.	경기육괴 북서부 영흥도-선재도-대부도에 분포하는 변성퇴적암 내 채설성 저어콘의 SHRIMP U-Pb 연대(암석학회지 Petrol_v21n1p031)	37.297222 126.411389; 37.297222 126.654167; 37.183889 126.654167; 37.183889 126.411389
1063	YH03/06	Distribution diagrams showing the combined 207Pb/206Pb and 206Pb/238U age populations of zircon from (a) sample YH03, and (b) sample YH06.	PRAWN/LEAD 6.5.5, Isopot/EX	SHRIMP	Distribution diagrams showing the combined 207Pb/206Pb and 206Pb/238U age populations of zircon from (a) sample YH03, and (b) sample	경기육괴 북서부 영흥도-선재도-대부도에 분포하는 변성퇴적암 내 채설성 저어콘의 SHRIMP U-Pb 연대(암석학회지 Petrol_v21n1p031)	37.297222 126.411389; 37.297222 126.654167; 37.183889 126.654167; 37.183889 126.411389
1064	YH03/06	U-Th-Pb isotope compositions of zircon from meta-sandstones	PRAWN/LEAD 6.5.5, Isopot/EX	SHRIMP	U-Th-Pb isotope compositions of zircon from meta-sandstones	경기육괴 북서부 영흥도-선재도-대부도에 분포하는 변성퇴적암 내 채설성 저어콘의 SHRIMP U-Pb 연대(암석학회지 Petrol_v21n1p031)	37.297222 126.411389; 37.297222 126.654167; 37.183889 126.654167; 37.183889 126.411389
1065	HDQ4	The location of Suryum Fault Also shown are the three tectonic blocks(Daebo, Wolseong and Gori Block from north to south), suggested by Choi, SJ et al.(2008) (modified from Choi et al., 2009). GF and UF represent Gampo and Ulsan Faults, respectively.	미상	OSL	The location of Suryum Fault Also shown are the three tectonic blocks(Daebo, Wolseong and Gori Block from north to south), suggested by Choi, SJ et al.(2008) (modified from Choi et al., 2009). GF and UF represent Gampo and Ulsan Faults, respectively.	수렴단층노두 해안단구 퇴적층의 OSL 연대에 대한 재고찰 : 단일입자 OSL 연대측정 연구(암석학회지 Petrol_v23n3p187)	35.150000 128.875000; 35.150000 129.625000; 35.025000 129.625000; 35.025000 128.875000
1066	HDQ4	Quartz grains loaded in a single grain disk for OSL signal measurements.	미상	OSL	Quartz grains loaded in a single grain disk for OSL signal measurements.	수렴단층노두 해안단구 퇴적층의 OSL 연대에 대한 재고찰 : 단일입자 OSL 연대측정 연구(암석학회지 Petrol_v23n3p187)	35.150000 128.875000; 35.150000 129.625000; 35.025000 129.625000; 35.025000 128.875000
1067	HDQ4	OSL decay curves from individual quartz grains. Following the administration of a laboratory dose of 100 Gy, OSL signals in individual quartz grains were measured at 125oC for 2 s. For De estimation, the OSL signals in the initial 0.2 s less background in the last 0.3 s were used. (a) Most quartz grains were bright and showed fast decaying OSL signals, reaching 10% of their initial count rates in less than 0.7 s after the onset of stimulation, (b) while OSL signals in others were dim and slowly decaying.	미상	OSL	OSL decay curves from individual quartz grains. Following the administration of a laboratory dose of 100 Gy, OSL signals in individual quartz grains were measured at 125oC for 2 s. For De estimation, the OSL signals in the initial 0.2 s less background in the last 0.3 s were used. (a) Most quartz grains were bright and showed fast decaying OSL signals, reaching 10% of their initial count rates in less than 0.7 s after the onset of stimulation, (b) while OSL signals in others were dim and slowly	수렴단층노두 해안단구 퇴적층의 OSL 연대에 대한 재고찰 : 단일입자 OSL 연대측정 연구(암석학회지 Petrol_v23n3p187)	35.150000 128.875000; 35.150000 129.625000; 35.025000 129.625000; 35.025000 128.875000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1068	HDQ4	Dose response growth curves of OSL signals emitted from quartz single grains. (a) Bright quartz grains (as shown in Fig. 4a) generally have higher saturation level of ~1400 Gy (i.e. 2×700 Gy), recycling and recuperation being close to unity and less than 10%, respectively (b) In general, dim quartz grains have much lower dose saturation level than that of brighter grains, and also show significant (far more than 10% of natural signal) '0' dose response (recuperation).	미상	OSL	Dose response growth curves of OSL signals emitted from quartz single grains. (a) Bright quartz grains (as shown in Fig. 4a) generally have higher saturation level of ~1400 Gy (i.e. 2×700 Gy), recycling and recuperation being close to unity and less than 10%, respectively (b) In general, dim quartz grains have much lower dose saturation level than that of brighter grains, and also show significant (far more than 10% of natural signal) '0' dose response	수렴단층노두 해안단구 퇴적층의 OSL 연대에 대한 재고찰 : 단일입자 OSL 연대측정 연구(암석학회지 Petrol_v23n3p187)	35.150000 128.875000; 35.150000 129.625000; 35.025000 129.625000; 35.025000 128.875000
1069	HDQ4	The radial plots showing De (equivalent dose) distribution of individual quartz grains (n=93). De values were derived using (a) Central Age Model, (b) Minimum Age Model, and (c) Finite Mixture Model. (d) Single grain data are summed up to simulate multiple grain single aliquot De distribution.	미상	OSL	The radial plots showing De (equivalent dose) distribution of individual quartz grains (n=93). De values were derived using (a) Central Age Model, (b) Minimum Age Model, and (c) Finite Mixture Model. (d) Single grain data are summed up to simulate multiple grain single aliquot De distribution.	수렴단층노두 해안단구 퇴적층의 OSL 연대에 대한 재고찰 : 단일입자 OSL 연대측정 연구(암석학회지 Petrol_v23n3p187)	35.150000 128.875000; 35.150000 129.625000; 35.025000 129.625000; 35.025000 128.875000
1070	JS-1410-09/20/22/23/24/25/36/38	Geological map with cross sections and southeastern side view of Sangumburi pit crater.	미상	XRF, ICP-MS	Geological map with cross sections and southeastern side view of Sangumburi pit crater.	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1071	JS-1410-09/20/22/23/24/25/36/38	Various photos of the stage 2. (A) a typical rock of FOB, composed of fine olivine and lath shape plagioclase, (B) a typical rock of APB II, (C) FOB xenolith enclosed in APB II, and (D) P II, composed of block and bomb. Photomicrographs of (E) FOB and (F) APB II under cross nicole. FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, P II = pyroclast II, and Ol = olivine.	미상	XRF, ICP-MS	Various photos of the stage 2. (A) a typical rock of FOB, composed of fine olivine and lath shape plagioclase, (B) a typical rock of APB II, (C) FOB xenolith enclosed in APB II, and (D) P II, composed of block and bomb. Photomicrographs of (E) FOB and (F) APB II under cross nicole. FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, P II =	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1072	JS-1410-09/20/22/23/24/25/36/38	(A) FOB and APB II from Sangumburi pit crater were overlain by Bangae-orum basalt, and (B) Germunorum trachybasalt flowed the side of P II from Sangumburi pit crater. FOB = feldspar olivine basalt, and P II = pyroclast II.	미상	XRF, ICP-MS	(A) FOB and APB II from Sangumburi pit crater were overlain by Bangae-orum basalt, and (B) Germunorum trachybasalt flowed the side of P II from Sangumburi pit crater. FOB = feldspar olivine basalt, and P II = pyroclast II.	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1073	JS-1410-09/20/22/23/24/25/36/38	(A) Total alkali vs. silica diagram (TAS) for volcanic rocks from Sangumburi pit crater (LeBas et al., 1986). The dashed dividing line between alkaline and sub-alkaline is from Kuno (1966). (B) Tectonomagmatic discrimination diagrams of Hf/3-Th-Ta for volcanic rocks from Sangumburi pit crater (Wood, 1980). APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II = pyroclast II.	미상	XRF, ICP-MS	(A) Total alkali vs. silica diagram (TAS) for volcanic rocks from Sangumburi pit crater (LeBas et al., 1986). The dashed dividing line between alkaline and sub-alkaline is from Kuno (1966). (B) Tectonomagmatic discrimination diagrams of Hf/3-Th-Ta for volcanic rocks from Sangumburi pit crater (Wood, 1980). APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1074	JS-1410-09/20/22/23/24/25/36/38	Harker variation diagram for volcanic rocks from Sangumburi pit crater. APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II = pyroclast II.	미상	XRF, ICP-MS	Harker variation diagram for volcanic rocks from Sangumburi pit crater. APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II =	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1075	JS-1410-09/20/22/23/24/25/36/38	A) Ba/Nb-Th/Nb and B) Th/Nb-Rb/Nb diagrams for volcanic rocks from Sangumburi pit crater. Symbols are same as Fig. 6. DMM = Depleted MORB mantle, EM = Enriched mantle, HIMU = mantle with high U/Pb ratio(Saunders et al., 1988; Weaver, 1991; Weyer et al., 2003).	미상	XRF, ICP-MS	A) Ba/Nb-Th/Nb and B) Th/Nb-Rb/Nb diagrams for volcanic rocks from Sangumburi pit crater. Symbols are same as Fig. 6. DMM = Depleted MORB mantle, EM = Enriched mantle, HIMU = mantle with high U/Pb ratio(Saunders et al., 1988; Weaver, 1991; Weyer et al.,	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1076	JS-1410-09/20/22/23/24/25/36/38	A schematic history of (A) stage 1 and (B)-(F) stage 2 in the Sangumburi pit crater.	미상	XRF, ICP-MS	A schematic history of (A) stage 1 and (B)-(F) stage 2 in the Sangumburi pit crater.	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1077	JS-1410-09/20/22/23/24/25/36/38	(A) reworked pit crater deposit on the bottom of Sangumburi pit crater, (B) lava cave in the APB I, and (C)-(D) collapsed surface and plane of P II. APB I = aphanitic pyroxene basalt I and P II = pyroclast II.	미상	XRF, ICP-MS	(A) reworked pit crater deposit on the bottom of Sangumburi pit crater, (B) lava cave in the APB I, and (C)-(D) collapsed surface and plane of P II. APB I = aphanitic pyroxene basalt I and P II = pyroclast II.	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1078	JS-1410-09/20/22/23/24/25/36/38	Major element (wt %) and modal compositions of volcanic rocks form Sangumburi pit crater. LOI = loss of ignition, APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II = pyroclast II. Pl = plagioclase, Or = orthoclase, Di = diopside, Hy = hypersthene, Ol = olivine, Il = ilmenite, Mt = magnetite, Ap = Apatite	미상	XRF, ICP-MS	Major element (wt %) and modal compositions of volcanic rocks form Sangumburi pit crater. LOI = loss of ignition, APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II = pyroclast II. Pl = plagioclase, Or = orthoclase, Di = diopside, Hy = hypersthene, Ol = olivine, Il = ilmenite, Mt = magnetite, Ap = Apatite	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1079	JS-1410-09/20/22/23/24/25/36/38	Trace element compositions (ppm) of volcanic rocks form Sangumburi pit crater. APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II = pyroclast II.	미상	XRF, ICP-MS	Trace element compositions (ppm) of volcanic rocks form Sangumburi pit crater. APB I = aphanitic pyroxene basalt I, FOB = feldspar olivine basalt, APB II = aphanitic pyroxene basalt II, and P II = pyroclast II.	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1080	JS-1410-09/20/22/23/24/25/36/38	40Ar/39Ar age for FOB, erupted at stage 2, from Sangumburi pit crater. FOB = feldspar olivine basalt.	미상	XRF, ICP-MS	40Ar/39Ar age for FOB, erupted at stage 2, from Sangumburi pit crater. FOB = feldspar olivine basalt.	제주도 산굼부리의 성인(암석학회지 Petrol_v25n3p283)	33.435986 126.688358; 33.435986 126.698594; 33.428031 126.698594; 33.428031 126.688358
1081	SS25-8-1/3, SS15-56-1/4	(a) Geological map of the Mt. Halla and the Baengnokdam summit crater areas. Inset: the location of Jeju Island. (b) Aerial view of Mt. Halla area from the southwest with overlaid geological map (vertical exaggeration of x2). Square and bold square in figures indicate the locations of OSL dating for Hallansan Trachyte.	미상	TL/OSL	(a) Geological map of the Mt. Halla and the Baengnokdam summit crater areas. Inset: the location of Jeju Island. (b) Aerial view of Mt. Halla area from the southwest with overlaid geological map (vertical exaggeration of x2). Square and bold square in figures indicate the locations of OSL dating for Hallansan	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1082	SS25-8-1/3, SS15-56-1/4	Areal view of the Baengnokdam summit crater from the northwest.	미상	TL/OSL	Areal view of the Baengnokdam summit crater from the northwest.	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1083	SS25-8-1/3, SS15-56-1/4	Stage-specific E-W cross-sectional model showing the formative process of the Baengnokdam summit crater. (a) There existed scoria cones before the early trachytic eruption. (b) Early small dome growth was followed by dome collapse emplacing trachyte breccias via pyroclastic flows. (c) The dome had gradually grown in combination of both exogenous and endogenous processes, as well as by accidental autobrecciations. (d) After a significant period of eruptive quiescence and erosion, eruptions reinitiated in an explosive style of trachybasaltic magma. (e) Following short wanning period of eruption, long-lasting lava-fountaining or effusive eruptions generated lava flows covering a large area around crater. Some lava flowed out over the west crater rim and covered trachyte breccias. During the long lasting magma eruption, the repeated magma supply and drainage caused the scoria cone to collapse and the crater to become larger. f) After the complete cessation of volcanism at Mt. Halla, erosion and sedimentation occur inside and outside the crater.	미상	TL/OSL	Stage-specific E-W cross-sectional model showing the formative process of the Baengnokdam summit crater. (a) There existed scoria cones before the early trachytic eruption. (b) Early small dome growth was followed by dome collapse emplacing trachyte breccias via pyroclastic flows. (c) The dome had gradually grown in combination of both exogenous and endogenous processes, as well as by accidental autobrecciations. (d) After a significant period of eruptive quiescence and erosion, eruptions reinitiated in an explosive style of trachybasaltic magma. (e) Following short wanning period of eruption, long-lasting lava-fountaining or effusive eruptions generated lava flows covering a large area around crater. Some lava flowed out over the west crater rim and covered trachyte breccias. During the long lasting magma eruption, the repeated magma supply and drainage caused the scoria cone to collapse and the crater to become larger. f) After the complete cessation of volcanism at Mt. Halla, erosion and	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1084	SS25-8-1/3, SS15-56-1/4	(a) Trachybasalt scoria deposit and overlying lava layer exposed on the eastern inner slope of the Baengnokdam summit crater. (b) Partially reworked volcanoclastic deposits between early explosive and late effusive eruption units. (c) Close-up of alternated primary scoria and reworked volcanoclastic layers. Reworked layers show thin laminae and small cross beds.	미상	TL/OSL	(a) Trachybasalt scoria deposit and overlying lava layer exposed on the eastern inner slope of the Baengnokdam summit crater. (b) Partially reworked volcanoclastic deposits between early explosive and late effusive eruption units. (c) Close-up of alternated primary scoria and reworked volcanoclastic layers. Reworked layers show thin laminae and small cross beds.	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1085	SS25-8-1/3, SS15-56-1/4	(a) & (b) Photograph showing the sampling locations for age dating under the Hallasan Trachyte. (c) Outcrop features of the epiclastic deposit on the Witse oreum lava-flow unit. (d) Outcrop photograph showing the sampling locations for OSL dating. Samples are collected across the sharp boundary marked by the presence of trachyte fragments within the epiclastic deposit. White circles in photographs indicate the sampling points for OSL dating.	미상	TL/OSL	(a) & (b) Photograph showing the sampling locations for age dating under the Hallasan Trachyte. (c) Outcrop features of the epiclastic deposit on the Witse oreum lava-flow unit. (d) Outcrop photograph showing the sampling locations for OSL dating. Samples are collected across the sharp boundary marked by the presence of trachyte fragments within the epiclastic deposit. White circles in photographs indicate the sampling points for OSL dating.	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1086	SS25-8-1/3, SS15-56-1/4	(a) 3D view showing the aerial coverage of the Baengnokdam Trachybasalt lava flows (yellow line). Red circles indicate the locations of OSL dating in this study. Black circles indicate the locations of Ar-Ar dating for this lava in Koh et al. (2013). (b) & (c) Outcrop features of the reworked volcanoclastic deposits and the paleosol dated in this study.	미상	TL/OSL	(a) 3D view showing the aerial coverage of the Baengnokdam Trachybasalt lava flows (yellow line). Red circles indicate the locations of OSL dating in this study. Black circles indicate the locations of Ar-Ar dating for this lava in Koh et al. (2013). (b) & (c) Outcrop features of the reworked volcanoclastic deposits and the paleosol dated in this study.	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1087	SS25-8-1/3, SS15-56-1/4	OSL age results for sediments related with the Hallasan Trachyte	미상	TL/OSL	OSL age results for sediments related with the Hallasan Trachyte	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1088	SS25-8-1/3, SS15-56-1/4	OSL age results for sediments underlying the Baengnokdam Trachybasalt	미상	TL/OSL	OSL age results for sediments underlying the Baengnokdam	제주도 한라산 백록담 일대의 화산활동사 (암석학회지 Petrol_v26n3p221)	33.351444 126.522889 33.355250 126.519944
1089	MS1~14	Geologic map of the study area modified after Hwang and Kihm et al.(2007) and sampling locations. Triangles and circles represent sample sites for biotite monzogranite and biotite alkaligranite, respectively.	미상	ICP-MS	Geologic map of the study area modified after Hwang and Kihm et al.(2007) and sampling locations. Triangles and circles represent sample sites for biotite monzogranite and biotite alkaligranite, respectively.	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611

학술논문자료 시료등록 메타데이터 목록

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1090	MS1~14	The classification of the Myeongseongsan granite using the parameters R1 and R2 (after de la Roche et al., 1980), calculated from millication proportions. $R_1=4Si-11(Na+K)-2(Fe+Ti)$; $R_2=6Ca+2Mg+Al$. The pale pinkcolored granite is plotted in monzogranite field, whereas the white-colored granite is plotted in the alkalignanite area, respectively.	미상	ICP-MS	The classification of the Myeongseongsan granite using the parameters R1 and R2 (after de la Roche et al., 1980), calculated from millication proportions. $R_1=4Si-11(Na+K)-2(Fe+Ti)$; $R_2=6Ca+2Mg+Al$. The pale pinkcolored granite is plotted in monzogranite field, whereas the white-colored granite is plotted in the alkalignanite area,	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611
1091	MS1~14	Harker variation diagrams of major elements for the Myeongseongsan Granite.	미상	ICP-MS	Harker variation diagrams of major elements for the Myeongseongsan Granite.	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611
1092	MS1~14	(a) AFM diagram illustrating the calc-alkaline trend for the Myeongseongsan granite. The boundary between tholeiitic series and calc-alkaline series is after Irvine and Baragar(1971). (b) K2O vs SiO2 diagram. The boundary lines are from Le Maitre et al.(1989). (c) $Al_2O_3/(Na_2O+K_2O+CaO)$ vs. $Al_2O_3/(Na_2O+K_2O)$ diagram (after Maniar and Piccoli, 1989). The Myeongseongsan granite samples are all plotted in the peraluminous field. (d) Classification of the Myeongseongsan granite after Tarney and Jones(1994), and samples are plotted in the low Ba-Sr granite field.	미상	ICP-MS	(a) AFM diagram illustrating the calc-alkaline trend for the Myeongseongsan granite. The boundary between tholeiitic series and calc-alkaline series is after Irvine and Baragar(1971). (b) K2O vs SiO2 diagram. The boundary lines are from Le Maitre et al.(1989). (c) $Al_2O_3/(Na_2O+K_2O+CaO)$ vs. $Al_2O_3/(Na_2O+K_2O)$ diagram (after Maniar and Piccoli, 1989). The Myeongseongsan granite samples are all plotted in the peraluminous field. (d) Classification of the Myeongseongsan granite after Tarney and Jones(1994), and samples are plotted in the low Ba-	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611
1093	MS1~14	(a) Chondrite-normalized REE patterns for the Myeongseongsan granite normalized to the composition of the chondrite by Nakamura (1974) and Boynton (1984). The fields for the two types of high-SiO2 granites (cold-wet and hot-dry) are also shown (Bachmann and Bergantz, 2008). (b) Primordial mantle-normalized spider diagram of the Myeongseongsan granite (Wood et al., 1979, 1981; McDonough et al., 1991).	미상	ICP-MS	(a) Chondrite-normalized REE patterns for the Myeongseongsan granite normalized to the composition of the chondrite by Nakamura (1974) and Boynton (1984). The fields for the two types of high-SiO2 granites (cold-wet and hot-dry) are also shown (Bachmann and Bergantz, 2008). (b) Primordial mantle-normalized spider diagram of the Myeongseongsan granite (Wood et al., 1979, 1981;	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611
1094	MS1~14	(a) Rb, (b) Ba, and (c) Eu/Eu^* vs. Sr and (d) V vs. TiO2 diagrams for the Myeongseongsan Granite showing fractionation of plagioclase, K-feldspar, and hornblende during magmatic evolution from biotite monzogranite to biotite alkalignanite.	미상	ICP-MS	(a) Rb, (b) Ba, and (c) Eu/Eu^* vs. Sr and (d) V vs. TiO2 diagrams for the Myeongseongsan Granite showing fractionation of plagioclase, K-feldspar, and hornblende during magmatic evolution from biotite monzogranite to biotite alkalignanite.	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611

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1095	MS1~14	(a) 10000*Ga/Al vs. Zr, (b) Zr+Nb+Ce+Y vs. Fe ₂ O ₃ (t)/MgO classification diagrams of Whalen et al. (1987) for the Myeongseongsan Granite (FG: fractionated S- and I-type felsic granites; OGT: unfractionated S- and I-type granites), (c) Rb/Sr vs Rb/Ba diagram (Sylvester, 1998; Zhao et al., 2016), (d) Al ₂ O ₃ /TiO ₂ vs. CaO/Na ₂ O diagram (Sylvester, 1998; Jung and Pfander, 2007; Zhao et al., 2016).	미상	ICP-MS	(a) 10000*Ga/Al vs. Zr, (b) Zr+Nb+Ce+Y vs. Fe ₂ O ₃ (t)/MgO classification diagrams of Whalen et al. (1987) for the Myeongseongsan Granite (FG: fractionated S- and I-type felsic granites; OGT: unfractionated S- and I-type granites), (c) Rb/Sr vs Rb/Ba diagram (Sylvester, 1998; Zhao et al., 2016), (d) Al ₂ O ₃ /TiO ₂ vs. CaO/Na ₂ O diagram (Sylvester, 1998; Jung and Pfander, 2007;	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611
1096	MS1~14	Concentrations of major and trace element of the Myeongseongsan Granite	미상	ICP-MS	Concentrations of major and trace element of the Myeongseongsan Granite	경기육괴 북서부에 분포하는 백악기 명성산 화강암의 성인에 대한 지화학적 연구 (암석학회지 Petrol_v26n4p327)	38.190833 127.203611; 38.190833 127.344444; 38.000556 127.344444; 38.000556 127.203611
1097	UL154/187/212/233/235/237/871/872/873/874, RU120	General geological map of Ulleung Island (after Hwang et al., 2012), together showing sample locations.	미상	XRF; ICP-MS	General geological map of Ulleung Island (after Hwang et al., 2012), together showing sample locations.	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1098	UL154/187/212/233/235/237/871/872/873/874, RU120	(a) Classification of the Dodong Basaltic Rocks on the total alkali silica (TAS) diagram. The fields accord to rock nomenclature schemes of Le Maitre(1984) and Le Bas et al.(1986); (b) K ₂ O versus Na ₂ O plot of the Dodong Basaltic Rocks, showing the subdivision of the alkalic series into K and Na subseries. The boundary line K ₂ O/(Na ₂ O-1.5) are designed from Le Maitre(1984) and Zanettin(1984), and K ₂ O/(Na ₂ O-2), Le Bas et al.(1986).	미상	XRF; ICP-MS	(a) Classification of the Dodong Basaltic Rocks on the total alkali silica (TAS) diagram. The fields accord to rock nomenclature schemes of Le Maitre(1984) and Le Bas et al.(1986); (b) K ₂ O versus Na ₂ O plot of the Dodong Basaltic Rocks, showing the subdivision of the alkalic series into K and Na subseries. The boundary line K ₂ O/(Na ₂ O-1.5) are designed from Le Maitre(1984) and Zanettin(1984), and K ₂ O/(Na ₂ O-2), Le Bas et al.(1986).	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1099	UL154/187/212/233/235/237/871/872/873/874, RU120	(a) Normalized spider diagram patterns of selected elements for the Dodong Basaltic Rocks. Values are normalized to primordial or Archean mantle from Sun and Nesbitt(1977); (b) Chondrite-normalized REE patterns for the Dodong Basaltic Rocks.	미상	XRF; ICP-MS	(a) Normalized spider diagram patterns of selected elements for the Dodong Basaltic Rocks. Values are normalized to primordial or Archean mantle from Sun and Nesbitt(1977); (b) Chondrite-normalized REE patterns for the Dodong Basaltic Rocks.	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1100	UL154/187/212/233/235/237/871/872/873/874, RU120	Tectonic discrimination diagrams for the Dodong Basaltic Rocks based on (a) Rb-Y+Nb (after Pearce et al., 1984) and (b) Zr/Y-Zr (after Pearce and Norry, 1979).	미상	XRF; ICP-MS	Tectonic discrimination diagrams for the Dodong Basaltic Rocks based on (a) Rb-Y+Nb (after Pearce et al., 1984) and (b) Zr/Y-Zr (after Pearce and Norry, 1979).	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1101	UL154/187/212/233/235/237/871/872/873/874, RU120	Tectonic discrimination diagrams for the Dodong Basaltic Rocks based on (a) Th-Nb-Zr (after Wood, 1980) and (b) Th-Nb-Hf (after Wood, 1980).	미상	XRF; ICP-MS	Tectonic discrimination diagrams for the Dodong Basaltic Rocks based on (a) Th-Nb-Zr (after Wood, 1980) and (b) Th-Nb-Hf (after Wood, 1980).	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1102	UL154/187/212/233/235/237/871/872/873/874, RU120	Tectonic discrimination diagrams for the Dodong Basaltic Rocks based on (a) Th-Ta-Hf (after Wood, 1980) and (b) Zr-Y-Nb (after Meschede, 1986).	미상	XRF; ICP-MS	Tectonic discrimination diagrams for the Dodong Basaltic Rocks based on (a) Th-Ta-Hf (after Wood, 1980) and (b) Zr-Y-Nb (after Meschede, 1986).	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003

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1103	UL154/187/212/233/ 235/237/871/872/87 3/874, RU120	Distinguishment of the Dodong Basaltic Rocks from the different tectonic rocks based on (a) Chondrite-normalized (La/Yb) _n vs. La(ppm) ratio; (b) Chondrite-normalized (La/Nb) _n vs. (Ba/Nb) _n ratios. OIB, oceanic island basalt (Sun and McDonough, 1989); N-MORB, normal mid-ocean ridge basalt (Sun and McDonough, 1989); CC, average continental crust (Rudnick and Gao, 2005).	미상	XRF; ICP-MS	Distinguishment of the Dodong Basaltic Rocks from the different tectonic rocks based on (a) Chondrite-normalized (La/Yb) _n vs. La(ppm) ratio; (b) Chondrite-normalized (La/Nb) _n vs. (Ba/Nb) _n ratios. OIB, oceanic island basalt (Sun and McDonough, 1989); N-MORB, normal mid-ocean ridge basalt (Sun and McDonough, 1989); CC, average continental crust (Rudnick and	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1104	UL154/187/212/233/ 235/237/871/872/87 3/874, RU120	Concentrations of major and trace elements for the Dodong Basaltic Rocks	미상	XRF; ICP-MS	Concentrations of major and trace elements for the Dodong Basaltic Rocks	울릉도 도동현무암질암류의 화산작용과 암석성인(암석학회지 Petrol_v26n4p361)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1105	PDC-1~5, PBB-1~3	Regional geologic and structural map of the Miocene basin province in southeast Korea (a) and geological map of the Pohang (b) and Janggi (c) basins with sampling site (●).	미상	XRD, XRF	Regional geologic and structural map of the Miocene basin province in southeast Korea (a) and geological map of the Pohang (b) and Janggi (c) basins with sampling site (●).	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814
1106	PDC-1~5, PBB-1~3	Outcrop photographs of Pohang Daljeon-ri columnar joint and around the Noeseongsan. (a~d) Pohang Daljeon columnar joint (e, f) Occurrence of Noerok in Noeseongsan (g) Noerok in Pohang Blue-valley construction site (h) dacitic tuff in the Janggi Basin.	미상	XRD, XRF	Outcrop photographs of Pohang Daljeon-ri columnar joint and around the Noeseongsan. (a~d) Pohang Daljeon columnar joint (e, f) Occurrence of Noerok in Noeseongsan (g) Noerok in Pohang Blue-valley construction site (h) dacitic tuff in the Janggi Basin.	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814
1107	PDC-1~5, PBB-1~3	Comparison of magnetic susceptibility for the Pohang Daljeonri columnar joint and the Noeseongsan Basaltic rock.	미상	XRD, XRF	Comparison of magnetic susceptibility for the Pohang Daljeonri columnar joint and the Noeseongsan Basaltic rock.	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814
1108	PDC-1~5, PBB-1~3	Microscope photograph of the Pohang Daljeon-ri columnar joint and basaltic rocks. (a) Pohang Daljeon-ri columnar joint, (b) Occurrence of the Noerok in Noeseongsan, (c) Pohang Blue-valley construction site.	미상	XRD, XRF	Microscope photograph of the Pohang Daljeon-ri columnar joint and basaltic rocks. (a) Pohang Daljeon-ri columnar joint, (b) Occurrence of the Noerok in Noeseongsan, (c) Pohang Blue-valley construction site.	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814
1109	PDC-1~5, PBB-1~3	X-Ray analysis results of the Pohang Daljeon-ri columnar joint (a) and the Noeseongsan Basaltic rocks (b). Ac: analcime, Py: clinopyroxene, Cc: Clinoclhorite, A-f: akali-feldspar, Bt: biotite, Mo: montmorillonite, An: andesine.	미상	XRD, XRF	X-Ray analysis results of the Pohang Daljeon-ri columnar joint (a) and the Noeseongsan Basaltic rocks (b). Ac: analcime, Py: clinopyroxene, Cc: Clinoclhorite, A-f: akali-feldspar, Bt: biotite, Mo: montmorillonite, An: andesine.	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814
1110	PDC-1~5, PBB-1~3	Plot of Na ₂ O+K ₂ O vs. SiO ₂ (a) and tectonomagmatic discrimination of the Pohang Daljeon-ri columnar joint and Noeseongsan basaltic rock (b).	미상	XRD, XRF	Plot of Na ₂ O+K ₂ O vs. SiO ₂ (a) and tectonomagmatic discrimination of the Pohang Daljeon-ri columnar joint and Noeseongsan basaltic rock (b).	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1111	PDC-1~5, PBB-1~3	Chemical composition of the Pohang Daljeon-ri columnar joint and Noeseongsan basaltic rock	미상	XRD, XRF	Chemical composition of the Pohang Daljeon-ri columnar joint and Noeseongsan basaltic rock	포항 달전리 주상절리와 뇌성산 뇌록산지의 현무암 비교 분석(암석학회지 Petrol_v27n4p185)	36.085022 129.238814; 36.085022 129.580050; 35.886078 129.580050; 35.886078 129.238814
1112	NS, GJ	Geological map around Mt. Noeseongsan, showing study area of the present study (Kim et al., 2011).	미상	XRD, XRF	Geological map around Mt. Noeseongsan, showing study area of the present study (Kim et al., 2011).	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500
1113	NS, GJ	Occurrence and mineral composition of Noerok in Mt. Gwangjeongsan site. (a~c) Outcrop photographs showing Gwangjeongsan site. (d) Vitrified and non-vitrified Noerok samples. (e) The boundary between Noeseongsan basaltic rock and Noerok from Gwangjeongsan site. (f) Thin-section photomicrographs showing Noeseongsan basaltic rock from Gwangjeongsan place. (Mineral abbreviation: Ap, apatite; Cel, celadonite; Cpx, clinopyroxene; Opx, orthopyroxene; Ol, olivine; Opq, opaque mineral; Pl, plagioclase)	미상	XRD, XRF	Occurrence and mineral composition of Noerok in Mt. Gwangjeongsan site. (a~c) Outcrop photographs showing Gwangjeongsan site. (d) Vitrified and non-vitrified Noerok samples. (e) The boundary between Noeseongsan basaltic rock and Noerok from Gwangjeongsan site. (f) Thin-section photomicrographs showing Noeseongsan basaltic rock from Gwangjeongsan place. (Mineral abbreviation: Ap, apatite; Cel, celadonite; Cpx, clinopyroxene; Opx, orthopyroxene; Ol, olivine; Opq, opaque mineral; Pl, plagioclase)	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500
1114	NS, GJ	Classification of Noerok samples according to its color.	미상	XRD, XRF	Classification of Noerok samples according to its color.	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500
1115	NS, GJ	X-ray diffraction analysis of Noerok samples from Mt. Noeseongsan and Mt. Gwangjeongsan.	미상	XRD, XRF	X-ray diffraction analysis of Noerok samples from Mt. Noeseongsan and Mt. Gwangjeongsan.	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500
1116	NS, GJ	SiO ₂ , MgO versus oxides variation diagrams of Noerok samples.	미상	XRD, XRF	SiO ₂ , MgO versus oxides variation diagrams of Noerok samples.	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500
1117	NS, GJ	A classified table of Noerok sample according to its features from present study.	미상	XRD, XRF	A classified table of Noerok sample according to its features from present study.	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500
1118	NS, GJ	Chemical analyses of the Noerok samples in study area. Unit: (wt. %)	미상	XRD, XRF	Chemical analyses of the Noerok samples in study area. Unit: (wt. %)	포항 장기면 일대에 산출되는 뇌록의 다양성 연구(암석학회지 Petrol_v27n4p195)	35.962222 129.487500; 35.962222 129.535278; 35.894444 129.535278; 35.894444 129.487500

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1119	2010mt-17b/18c/19a	Geological map of the Sancheong area, SW Yeongnam massif, Korea (modified after Kim et al., 1964 and Kang and Park, 1975) showing locations of the analyzed samples. The upper left inset shows the location of the study area in the southern Korean Peninsula. IB, Imjingang belt; GM, Gyeonggi massif; OB, Okcheon belt; TB, Taebaeksan basin; YM, Yeongnam massif; GB, Gyeongsang basin.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Geological map of the Sancheong area, SW Yeongnam massif, Korea (modified after Kim et al., 1964 and Kang and Park, 1975) showing locations of the analyzed samples. The upper left inset shows the location of the study area in the southern Korean Peninsula. IB, Imjingang belt; GM, Gyeonggi massif; OB, Okcheon belt; TB, Taebaeksan basin; YM, Yeongnam massif; GB, Gyeongsang	영남육괴 남서부 산청 동부지역에 분포하는 트라이아스기 변형 화강암의 U-Pb 연대측정과 그 함의(암석학회지 Petrol_v27n4p223)	35.427444 127.963361 35.418389 127.975333 35.417111 127.976222
1120	2010mt-17b/18c/19a	Representative cathodoluminescence (CL) images for zircon grains from the deformed granite showing locations of analysed spots and their apparent ages in Ma. Spots are 25 µm in diameter. Scale bars are 100 µm in length.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Representative cathodoluminescence (CL) images for zircon grains from the deformed granite showing locations of analysed spots and their apparent ages in Ma. Spots are 25 µm in diameter. Scale bars are 100 µm in length.	영남육괴 남서부 산청 동부지역에 분포하는 트라이아스기 변형 화강암의 U-Pb 연대측정과 그 함의(암석학회지 Petrol_v27n4p223)	35.427444 127.963361 35.418389 127.975333 35.417111 127.976222
1121	2010mt-17b/18c/19a	U-Pb concordia diagrams for the zircons separated from the deformed granite samples. a) sample 2010mt-17b, b) sample 2019mt-18a, and c) sample 2019mt-19c. Error ellipses are at 1σ level and the calculated ages are at 95% confidence.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	U-Pb concordia diagrams for the zircons separated from the deformed granite samples. a) sample 2010mt-17b, b) sample 2019mt-18a, and c) sample 2019mt-19c. Error ellipses are at 1σ level and the calculated ages are at 95% confidence.	영남육괴 남서부 산청 동부지역에 분포하는 트라이아스기 변형 화강암의 U-Pb 연대측정과 그 함의(암석학회지 Petrol_v27n4p223)	35.427444 127.963361 35.418389 127.975333 35.417111 127.976222
1122	2010mt-17b/18c/19a	U-Pb zircon isotopic data for the sample 2010mt-17b from the deformed granite from the Sancheong area, the SW Yeongnam massif.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	U-Pb zircon isotopic data for the sample 2010mt-17b from the deformed granite from the Sancheong area, the SW Yeongnam massif.	영남육괴 남서부 산청 동부지역에 분포하는 트라이아스기 변형 화강암의 U-Pb 연대측정과 그 함의(암석학회지 Petrol_v27n4p223)	35.427444 127.963361 35.418389 127.975333 35.417111 127.976222
1123	2010mt-17b/18c/19a	U-Pb zircon isotopic data for the sample 2010mt-18c from the deformed granite from the Sancheong area, the SW Yeongnam massif.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	U-Pb zircon isotopic data for the sample 2010mt-18c from the deformed granite from the Sancheong area, the SW Yeongnam massif.	영남육괴 남서부 산청 동부지역에 분포하는 트라이아스기 변형 화강암의 U-Pb 연대측정과 그 함의(암석학회지 Petrol_v27n4p223)	35.427444 127.963361 35.418389 127.975333 35.417111 127.976222
1124	2010mt-17b/18c/19a	U-Pb zircon isotopic data for the sample 2010mt-19a from the deformed granite from the Sancheong area, the SW Yeongnam massif.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	U-Pb zircon isotopic data for the sample 2010mt-19a from the deformed granite from the Sancheong area, the SW Yeongnam massif.	영남육괴 남서부 산청 동부지역에 분포하는 트라이아스기 변형 화강암의 U-Pb 연대측정과 그 함의(암석학회지 Petrol_v27n4p223)	35.427444 127.963361 35.418389 127.975333 35.417111 127.976222
1125	HC707/730/703	Geological map around the Jayang caldera, showing sample locations of the present study together.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Geological map around the Jayang caldera, showing sample locations of the present study together.	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrol_v28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1126	HC707/730/703	Photographs of rhyolitic rocks around the Jayang caldera. (a) Massive lapilli tuff of the Unjusan Tuff inside the caldera; (b) Lithic-rich tuff breccia of the Unjusan Tuff inside the caldera; (c) Massive lapilli tuff of the Unjusan Tuff inside the caldera; (d) Welded tuff of the Unjusan Tuff outside the caldera; (e) Rhyolite dike (right) with flow-banding, intruding the Unjusan Tuff (left) inside the caldera; (f) Flow-banding with subvertical attitude in the marginal part of the huge ring dike.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Photographs of rhyolitic rocks around the Jayang caldera. (a) Massive lapilli tuff of the Unjusan Tuff inside the caldera; (b) Lithic-rich tuff breccia of the Unjusan Tuff inside the caldera; (c) Massive lapilli tuff of the Unjusan Tuff inside the caldera; (d) Welded tuff of the Unjusan Tuff outside the caldera; (e) Rhyolite dike (right) with flow-banding, intruding the Unjusan Tuff (left) inside the caldera; (f) Flow-banding with subvertical attitude in the marginal part of the	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrology 28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333
1127	HC707/730/703	Representative cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Unjusan Tuff (HC707, HC730), and rhyolite ring dike (HC703).	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Representative cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Unjusan Tuff (HC707, HC730), and rhyolite ring dike (HC703).	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrology 28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333
1128	HC707/730/703	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrology 28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333
1129	HC707/730/703	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from three samples.	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from three samples.	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrology 28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333
1130	HC707/730/703	Summary of SHRIMP U-Pb isotopic data of the analytical zircons from the volcanic rocks related with the Jayang caldera	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Summary of SHRIMP U-Pb isotopic data of the analytical zircons from the volcanic rocks related with the Jayang caldera	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrology 28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333
1131	HC707/730/703	Geological sequences and SHRIMP U-Pb ages of the volcanic rocks related to three calderas in the eastern Uiseong subbasin	SQUID Ver 2.5, Isoplot/Ex v. 3.6	SHRIMP	Geological sequences and SHRIMP U-Pb ages of the volcanic rocks related to three calderas in the eastern Uiseong subbasin	영천 북부 자양 칼데라 주변의 화산암류에 대한 SHRIMP U-Pb 저어콘 연대측정과 화산과정(암석학회지 Petrology 28n4p237)	36.125000 128.983333; 36.125000 129.125000; 36.050000 129.125000; 36.050000 128.983333
1132	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Geologic map of the study area (from Lim et al., 2016).	미상	EPMA, 안정동위원소질량분석기	Geologic map of the study area (from Lim et al., 2016).	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Minerology 31n2p087)	36.800593 127.976325

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1133	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Photomicrographs of skarns and ores from the Central (a-f) and Main (g-l) orebodies in the Manjang deposit. (a) Skarn showing anisotropic and zoned garnet replaced by clinopyroxene, (b) Garnet replaced by clinopyroxene and epidote, (c) Sericite and chlorite veined by fluorite and calcite, (d) Pyrite replaced by pyrrhotite coexisting with sphalerite and chalcopyrite, (e) Magnetite coexisting with pyrrhotite, (f) Sphalerite coexisting with chalcopyrite and stannite, (g) Zoned garnet coexisting with clinopyroxene in skarn, (h) Chlorite and sericite associated with quartz, (i) Arsenopyrite coexisting with pyrite replaced by sphalerite and galena, (j) Arsenopyrite veined by chalcopyrite, (k) Chalcopyrite, galena and native bismuth assemblage within pyrite, (l) Anhedral magnetite associated with pyrrhotite and chalcopyrite. Abbreviations; Gt = garnet, Px = pyroxene, Ep = epidote, Ser = sericite, Chl = chlorite, Fl = fluorite, Cc = calcite, Mc = marcasite, Mt = magnetite, St = stannite, Bi = native bismuth. See Fig. 2 for other abbreviations.	미상	EPMA, 안정동위원소질량분석기	Photomicrographs of skarns and ores from the Central (a-f) and Main (g-l) orebodies in the Manjang deposit. (a) Skarn showing anisotropic and zoned garnet replaced by clinopyroxene, (b) Garnet replaced by clinopyroxene and epidote, (c) Sericite and chlorite veined by fluorite and calcite, (d) Pyrite replaced by pyrrhotite coexisting with sphalerite and chalcopyrite, (e) Magnetite coexisting with pyrrhotite, (f) Sphalerite coexisting with chalcopyrite and stannite, (g) Zoned garnet coexisting with clinopyroxene in skarn, (h) Chlorite and sericite associated with quartz, (i) Arsenopyrite coexisting with pyrite replaced by sphalerite and galena, (j) Arsenopyrite veined by chalcopyrite, (k) Chalcopyrite, galena and native bismuth assemblage within pyrite, (l) Anhedral magnetite associated with pyrrhotite and chalcopyrite. Abbreviations; Gt = garnet, Px = pyroxene, Ep = epidote, Ser = sericite, Chl = chlorite, Fl = fluorite, Cc = calcite, Mc = marcasite, Mt = magnetite, St = stannite, Bi = native bismuth. See Fig. 2	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1134	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Paragenetic sequence of minerals from the Central and Main orebodies in the Manjang deposit.	미상	EPMA, 안정동위원소질량분석기	Paragenetic sequence of minerals from the Central and Main orebodies in the Manjang deposit.	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1135	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Chemical compositions of pyroxene and garnet from the Manjang deposit plotted on the Jo-Di-Hd and Pyr-Grs-Adr ternary diagram, respectively. Abbreviations; Jo = johannsenite, Di = diopside, Hd = hedenbergite, Pyr = pyrope + almandine + spessartine, Grs = grossular, Adr = andradite.	미상	EPMA, 안정동위원소질량분석기	Chemical compositions of pyroxene and garnet from the Manjang deposit plotted on the Jo-Di-Hd and Pyr-Grs-Adr ternary diagram, respectively. Abbreviations; Jo = johannsenite, Di = diopside, Hd = hedenbergite, Pyr = pyrope + almandine + spessartine, Grs = grossular, Adr = andradite.	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1136	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Compositional variation of Fe against Ca+Mg+ Al+Si for magnetite from the Manjang deposit.	미상	EPMA, 안정동위원소질량분석기	Compositional variation of Fe against Ca+Mg+ Al+Si for magnetite from the Manjang deposit.	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325

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1137	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Sulfur fugacity-temperature projection of the stability field of arsenopyrite from the Main orebody in the Manjang deposit. Abbreviations; Asp = arsenopyrite, Py = pyrite, L = S-As liquid.	미상	EPMA, 안정동위원소질량분석기	Sulfur fugacity-temperature projection of the stability field of arsenopyrite from the Main orebody in the Manjang deposit. Abbreviations; Asp = arsenopyrite, Py = pyrite, L = S-As	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1138	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Diagram showing partitioning of Fe and Zn between stannite and sphalerite at various temperatures from the Central orebody in the Manjang deposit. Temperature lines are based on data by Nakamura and Shima (1982).	미상	EPMA, 안정동위원소질량분석기	Diagram showing partitioning of Fe and Zn between stannite and sphalerite at various temperatures from the Central orebody in the Manjang deposit. Temperature lines are based on data by Nakamura and Shima (1982).	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1139	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of garnet from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of garnet from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1140	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of pyroxene from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of pyroxene from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1141	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of arsenopyrite from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of arsenopyrite from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1142	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of magnetite from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of magnetite from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1143	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of sphalerite from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of sphalerite from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1144	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of galena from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of galena from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1145	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Representative EPMA analyses of stannite from the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Representative EPMA analyses of stannite from the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325

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1146	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Sulfur isotope compositions of sulfide minerals from the Manjang deposit.	미상	EPMA, 안정동위원소질량분석기	Sulfur isotope compositions of sulfide minerals from the Manjang deposit.	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1147	C-1/2/5/6/107/108/109, M-19/20/21/24/25/26/27	Summary of orebody characteristics in the Manjang deposit	미상	EPMA, 안정동위원소질량분석기	Summary of orebody characteristics in the Manjang deposit	만장광상 중앙광체와 본광체의 광화작용과 생성환경(한국광물학회지 Miner_v31n2p087)	36.800593 127.976325
1148	Sep-1/2, Sm-1, Ba-1	Regional geological and structural map of the study area, SE Korea (from Cheon et al., 2012). A circle spot (F.C) indicates the locality of sepiolite.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	Regional geological and structural map of the study area, SE Korea (from Cheon et al., 2012). A circle spot (F.C) indicates the locality of sepiolite.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1149	Sep-1/2, Sm-1, Ba-1	(A) Fault gouge in the center of the fault fracture zone, (B) Black clay aggregates with greasy luster as the fault gouge.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	(A) Fault gouge in the center of the fault fracture zone, (B) Black clay aggregates with greasy luster as the fault gouge.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1150	Sep-1/2, Sm-1, Ba-1	XRD patterns of the altered rock (Sm-1) in the fracture zone and the fresh rock (Ba-1). F : feldspar, Sm : smectite, Px : pyroxene.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	XRD patterns of the altered rock (Sm-1) in the fracture zone and the fresh rock (Ba-1). F : feldspar, Sm : smectite, Px : pyroxene.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1151	Sep-1/2, Sm-1, Ba-1	XRD pattern of the sepiolite sample of the black fault gouge part. S : sepiolite.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	XRD pattern of the sepiolite sample of the black fault gouge part. S : sepiolite.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1152	Sep-1/2, Sm-1, Ba-1	XRD patterns of the sepiolite samples after treatment at various temperatures for 1 hour. UT : untreated, E : enstatite.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	XRD patterns of the sepiolite samples after treatment at various temperatures for 1 hour. UT : untreated, E : enstatite.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1153	Sep-1/2, Sm-1, Ba-1	SEM images showing fibrous shapes of the sepiolite sample.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	SEM images showing fibrous shapes of the sepiolite sample.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1154	Sep-1/2, Sm-1, Ba-1	TEM images showing fibrous shapes of the sepiolite sample and platy shapes of smectite.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	TEM images showing fibrous shapes of the sepiolite sample and platy shapes of smectite.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1155	Sep-1/2, Sm-1, Ba-1	Infrared absorption spectrum of the sepiolite sample.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	Infrared absorption spectrum of the sepiolite sample.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1156	Sep-1/2, Sm-1, Ba-1	DTA-TG curves of the sepiolite sample.	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	DTA-TG curves of the sepiolite sample.	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711

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1157	Sep-1/2, Sm-1, Ba-1	XRD data of sepiolite samples	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	XRD data of sepiolite samples	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1158	Sep-1/2, Sm-1, Ba-1	Major element compositions by XRF analysis of the sepiolite bearing samples, altered rock and basalt rock	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	Major element compositions by XRF analysis of the sepiolite bearing samples, altered rock and basalt rock	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1159	Sep-1/2, Sm-1, Ba-1	EPMA analysis (wt%) and cations for 24 non-hydrous oxygens of the sepiolite sample	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	EPMA analysis (wt%) and cations for 24 non-hydrous oxygens of the sepiolite sample	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1160	Sep-1/2, Sm-1, Ba-1	Chemical analysis of sepiolite samples (wt%)	미상	XRD; FTIR; DTA/TGA, SEM, TEM, XRF, EPMA	Chemical analysis of sepiolite samples (wt%)	포항시 남부 현무암체의 단층점토에서 산출되는 Fe-세피올라이트(한국광물학회지 Miner_v29n1p011)	35.980000 129.436711; 35.980000 129.460831; 35.952864 129.460831; 35.952864 129.436711
1161	DG-1~9	Geological and location map of the study area.	미상	XRD, SEM, TEM, PLM	Geological and location map of the study area.	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1162	DG-1~9	The scene of pit mouth in the Dong-A mine area.	미상	XRD, SEM, TEM, PLM	The scene of pit mouth in the Dong-A mine area.	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1163	DG-1~9	Occurrence of asbestos in outcrop around the Dong-a asbestos mine area.	미상	XRD, SEM, TEM, PLM	Occurrence of asbestos in outcrop around the Dong-a asbestos mine area.	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1164	DG-1~9	Sampling sites of the rock and soil in the Dong-a mine area.	미상	XRD, SEM, TEM, PLM	Sampling sites of the rock and soil in the Dong-a mine area.	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1165	DG-1~9	X-ray diffraction patterns of rock and soil sample. rock sample : DG-01, DG-02, DG-03, DG-09, soil sample : DG-04, DG-05, DG-06, DG-07, DG-08.	미상	XRD, SEM, TEM, PLM	X-ray diffraction patterns of rock and soil sample. rock sample : DG-01, DG-02, DG-03, DG-09, soil sample : DG-04, DG-05, DG-06, DG-07, DG-08.	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1166	DG-1~9	SEM microphotographs and EDS pattern of asbestos mineral from Dong-A mine (DG-01 : Tremolite, DG-02 : Tremolite, DG-03 : Actinolite, DG-04 : Tremolite, DG-05 : Tremolite, DG-06 : Tremolite, DG-07 : Actinolite, DG-08 : Tremolite, DG-09 : Tremolite).	미상	XRD, SEM, TEM, PLM	SEM microphotographs and EDS pattern of asbestos mineral from Dong-A mine (DG-01 : Tremolite, DG-02 : Tremolite, DG-03 : Actinolite, DG-04 : Tremolite, DG-05 : Tremolite, DG-06 : Tremolite, DG-07 : Actinolite, DG-08 : Tremolite, DG-09 : Tremolite).	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1167	DG-1~9	Microphotographs of tremolite from Dong-A mine.	미상	XRD, SEM, TEM, PLM	Microphotographs of tremolite from Dong-A mine.	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1168	DG-1~9	TEM photomicrograph and SAED pattern of the tremolite asbestos from Dong-A mine (A : 25,000X magnification. B : 100,000X magnification. C : 250,000X magnification).	미상	XRD, SEM, TEM, PLM	TEM photomicrograph and SAED pattern of the tremolite asbestos from Dong-A mine (A : 25,000X magnification. B : 100,000X magnification. C : 250,000X magnification).	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1169	DG-1~9	Main minerals compositions of rock and soil samples in Dong-a mine	미상	XRD, SEM, TEM, PLM	Main minerals compositions of rock and soil samples in Dong-a mine	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1170	DG-1~9	Chemical compositions of asbestos mineral analyzed by EDS; DG1-DG9	미상	XRD, SEM, TEM, PLM	Chemical compositions of asbestos mineral analyzed by EDS; DG1-DG9	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1171	DG-1~9	The d-value of XRD and SAED data of tremolite	미상	XRD, SEM, TEM, PLM	The d-value of XRD and SAED data of tremolite	동아광산 일대 투각섬석과 양기석의 산출 상태 및 광물학적 특성 연구(한국광물학회지 Miner_v28n4p333)	36.9485 128.190944
1172	bed rock, gouge	Geological map of the study area in the southeastern part of Korea.	미상	XRF, XRD, SEM-EDS, ICP	Geological map of the study area in the southeastern part of Korea.	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1173	bed rock, gouge	X-ray diffraction pattern of bed rock. Il: illite, Py: pyrophyllite, Q: quartz, T: topaz, Pr: pyrite.	미상	XRF, XRD, SEM-EDS, ICP	X-ray diffraction pattern of bed rock. Il: illite, Py: pyrophyllite, Q: quartz, T: topaz, Pr: pyrite.	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1174	bed rock, gouge	X-ray diffraction pattern of fault gauge. Ca: cacoenite, Sm: smectitie, Ch: chlorite, Go: goethite, Q: quartz.	미상	XRF, XRD, SEM-EDS, ICP	X-ray diffraction pattern of fault gauge. Ca: cacoenite, Sm: smectitie, Ch: chlorite, Go: goethite, Q: quartz.	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1175	bed rock, gouge	SEM images with EDS of the gouge sample. (a) Jarosite. (b) Cacoenite.	미상	XRF, XRD, SEM-EDS, ICP	SEM images with EDS of the gouge sample. (a) Jarosite. (b) Cacoenite.	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1176	bed rock, gouge	Fractions of the sequential extracted heavy metals in the samples. Step 1: labile, step 2: acid-soluble, step 3: organic, step 4: Crystalline oxide, step 5: pyritic, step 6: residual.	미상	XRF, XRD, SEM-EDS, ICP	Fractions of the sequential extracted heavy metals in the samples. Step 1: labile, step 2: acid-soluble, step 3: organic, step 4: Crystalline oxide, step 5: pyritic, step 6: residual.	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1177	bed rock, gouge	Summary of the sequential extraction procedure used to assess metal partitioning (Claff et al., 2010)	미상	XRF, XRD, SEM-EDS, ICP	Summary of the sequential extraction procedure used to assess metal partitioning (Claff et al., 2010)	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1178	bed rock, gouge	Chemical compositions of the samples from XRF analysis	미상	XRF, XRD, SEM-EDS, ICP	Chemical compositions of the samples from XRF analysis	함황철석 안산암 내 단층 비지의 광물학적 및 지구화학적 연구(한국광물학회지 Miner_v27n4p301)	35.399639 129.177172
1179	pl-1~8, Il-1~8	Geological map of Jikjeon-Ri area, Korea (modified from 1:50,000 scale Geological map of Chingyo Sheet).	미상	EPMA	Geological map of Jikjeon-Ri area, Korea (modified from 1:50,000 scale Geological map of Chingyo Sheet).	하동군 북천면 지역 함티타눔광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1180	pl-1~8, Il-1~8	Photomicrographs of two types of ilmenite. (A-B) ilmenite ore body in diorite, (C-D) ilmenite ore body in anorthosite (abbreviation: Pl, plagioclase; iL, ilmenite; Am, amphibole; Ap, apatite).	미상	EPMA	Photomicrographs of two types of ilmenite. (A-B) ilmenite ore body in diorite, (C-D) ilmenite ore body in anorthosite (abbreviation: Pl, plagioclase; iL, ilmenite; Am, amphibole; Ap, apatite).	하동군 북천면 지역 함티타눔광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1181	pl-1~8, Il-1~8	BSE images of ilmenite. (A-B) exsolution texture within orebody in diorite, (C) general ilmenite in anorthosite (abbreviation: Pl, plagioclase; iL, ilmenite; Am, amphibole; Ru, Rutile).	미상	EPMA	BSE images of ilmenite. (A-B) exsolution texture within orebody in diorite, (C) general ilmenite in anorthosite (abbreviation: Pl, plagioclase; iL, ilmenite; Am, amphibole; Ru, Rutile).	하동군 북천면 지역 함티타눔광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1182	pl-1~8, Il-1~8	Plots represent the composition of plagioclase within four rock types (after Fuhrman, M.L. and Lindsley, D.H., 1988).	미상	EPMA	Plots represent the composition of plagioclase within four rock types (after Fuhrman, M.L. and Lindsley, D.H., 1988).	하동군 북천면 지역 함티타늄광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1183	pl-1~8, Il-1~8	FeO-MnO variation diagram of ilmenite.	미상	EPMA	FeO-MnO variation diagram of ilmenite.	하동군 북천면 지역 함티타늄광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1184	pl-1~8, Il-1~8	Element mapping image of the ilmenite. (A) ilmenite - Fe oxide, (B) Rutile - Fe oxide.	미상	EPMA	Element mapping image of the ilmenite. (A) ilmenite - Fe oxide, (B) Rutile - Fe oxide.	하동군 북천면 지역 함티타늄광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1185	pl-1~8, Il-1~8	Electron microprobe analyses of plagioclase (wt. %)	미상	EPMA	Electron microprobe analyses of plagioclase (wt. %)	하동군 북천면 지역 함티타늄광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1186	pl-1~8, Il-1~8	Electron microprobe analyses of ilmenite (wt. %)	미상	EPMA	Electron microprobe analyses of ilmenite (wt. %)	하동군 북천면 지역 함티타늄광체 내 티탄철석의 산출특성(한국광물학회지 Miner_v27n4p197)	35.134072 127.834633; 35.134072 127.901975; 35.095072 127.901975; 35.095072 127.834633
1187	HC06/04/10	Geological map of the Hongcheon Fe-REE deposits (Oh et al., 2010).	미상	EPMA	Geological map of the Hongcheon Fe-REE deposits (Oh et al., 2010).	홍천 카보나타이트-포스코라이트 복합체에서 산출되는 자철석의 광물광물학회지 Miner_v26n4p299)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
1188	HC06/04/10	Photomicrographs of carbonatite (a-c) and phoscorite (d-f) rocks from stage I to III, respectively. Carbonatite: (a) dolomite and magnetite in stage I, (b) main REE mineralization in stage II, (c) abundant occurrence of quartz and Fe-carbonate in stage III, Phoscorite: (d) magnetite and dolomite in stage I, (e) main occurrence of apatite in stage II, (f) abundant quartz and Fe-carbonate in stage III. Abbreviations: Dol: dolomite, Mt: magnetite, Mz: monazite, Ap: apatite, Qtz: quartz, Cm: columbite, Py: pyrite.	미상	EPMA	Photomicrographs of carbonatite (a-c) and phoscorite (d-f) rocks from stage I to III, respectively. Carbonatite: (a) dolomite and magnetite in stage I, (b) main REE mineralization in stage II, (c) abundant occurrence of quartz and Fe-carbonate in stage III, Phoscorite: (d) magnetite and dolomite in stage I, (e) main occurrence of apatite in stage II, (f) abundant quartz and Fe-carbonate in stage III. Abbreviations: Dol: dolomite, Mt: magnetite, Mz: monazite, Ap: apatite, Qtz: quartz, Cm: columbite, Py: pyrite.	홍천 카보나타이트-포스코라이트 복합체에서 산출되는 자철석의 광물광물학회지 Miner_v26n4p299)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
1189	HC06/04/10	Compositional variation of Fe2+/(Fe2++Mg) against Mn, Ti, Al (a.p.f.u.) for magnetite from the Hongcheon Fe-REE deposits.	미상	EPMA	Compositional variation of Fe2+/(Fe2++Mg) against Mn, Ti, Al (a.p.f.u.) for magnetite from the Hongcheon Fe-REE deposits.	홍천 카보나타이트-포스코라이트 복합체에서 산출되는 자철석의 광물광물학회지 Miner_v26n4p299)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
1190	HC06/04/10	Compositional variation of Fe3+/(Fe3++Fe2+) against Ti (a.p.f.u.) for magnetite from the Hongcheon Fe-REE deposits.	미상	EPMA	Compositional variation of Fe3+/(Fe3++Fe2+) against Ti (a.p.f.u.) for magnetite from the Hongcheon Fe-REE deposits.	홍천 카보나타이트-포스코라이트 복합체에서 산출되는 자철석의 광물광물학회지 Miner_v26n4p299)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1191	HC06/04/10	Compositional variation of Al ₂ O ₃ against MgO for magnetite from the Hongcheon Fe-REE deposits in comparison with Kovdor, Vuoriyarvi, and Sokli complex in Kola peninsula. Data from Krasnova et al. (2004), Lee et al. (2004), and Karchevsky and Moutte (2004).	미상	EPMA	Compositional variation of Al ₂ O ₃ against MgO for magnetite from the Hongcheon Fe-REE deposits in comparison with Kovdor, Vuoriyarvi, and Sokli complex in Kola peninsula. Data from Krasnova et al. (2004), Lee et al. (2004), and Karchevsky and Moutte	홍천 카보나타이트-포스코라이트 복합체에서 산출되는 자철석의 광물화학(한국광물학회지 Miner_v26n4p299)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
1192	HC06/04/10	Representative chemical composition of magnetite from the Hongcheon Fe-REE deposits	미상	EPMA	Representative chemical composition of magnetite from the Hongcheon Fe-REE deposits	홍천 카보나타이트-포스코라이트 복합체에서 산출되는 자철석의 광물화학(한국광물학회지 Miner_v26n4p299)	37.670000 128.000000; 37.670000 128.030000; 37.520000 128.030000; 37.520000 128.000000
1193	thr-3/5/8/8a/8b/8c/8d/10	Geological map of Hadong area, Korea. Ilmenite mine is located in red box.	미상	EPMA	Geological map of Hadong area, Korea. Ilmenite mine is located in red box.	하동군 월형리에서 토름광물과 수반된 함REE 갈럼석의 산출상태(한국광물학회지 Miner_v25n4p295)	35.199153 127.859558; 35.199153 127.864906; 35.195456 127.864906; 35.195456 127.859558
1194	thr-3/5/8/8a/8b/8c/8d/10	Allanites specimen and measured counts by a spectrometer. (A) photomicrographs showing pleochroism of allanite at an angle of 100°, (B) at an angle of 145° (C & D) (All: allanite, Qtz: quartz).	미상	EPMA	Allanites specimen and measured counts by a spectrometer. (A) photomicrographs showing pleochroism of allanite at an angle of 100°, (B) at an angle of 145° (C & D) (All: allanite, Qtz:	하동군 월형리에서 토름광물과 수반된 함REE 갈럼석의 산출상태(한국광물학회지 Miner_v25n4p295)	35.199153 127.859558; 35.199153 127.864906; 35.195456 127.864906; 35.195456 127.859558
1195	thr-3/5/8/8a/8b/8c/8d/10	Element mapping image of allanite. (A) Low magnification, (B) high magnification.	미상	EPMA	Element mapping image of allanite. (A) Low magnification, (B) high magnification.	하동군 월형리에서 토름광물과 수반된 함REE 갈럼석의 산출상태(한국광물학회지 Miner_v25n4p295)	35.199153 127.859558; 35.199153 127.864906; 35.195456 127.864906; 35.195456 127.859558
1196	thr-3/5/8/8a/8b/8c/8d/10	SEM photographs of thorite (ThSiO ₄). (A) BSE, (B) EDX spectrum and (C) element mapping image.	미상	EPMA	SEM photographs of thorite (ThSiO ₄). (A) BSE, (B) EDX spectrum and (C) element mapping image.	하동군 월형리에서 토름광물과 수반된 함REE 갈럼석의 산출상태(한국광물학회지 Miner_v25n4p295)	35.199153 127.859558; 35.199153 127.864906; 35.195456 127.864906; 35.195456 127.859558
1197	thr-3/5/8/8a/8b/8c/8d/10	EPMA analyses of allanite in Wolheongri ilmenite mine area	미상	EPMA	EPMA analyses of allanite in Wolheongri ilmenite mine area	하동군 월형리에서 토름광물과 수반된 함REE 갈럼석의 산출상태(한국광물학회지 Miner_v25n4p295)	35.199153 127.859558; 35.199153 127.864906; 35.195456 127.864906; 35.195456 127.859558
1198	thr-3/5/8/8a/8b/8c/8d/10	EPMA analyses of thorite in Wolheongri ilmenite mine area.	미상	EPMA	EPMA analyses of thorite in Wolheongri ilmenite mine area.	하동군 월형리에서 토름광물과 수반된 함REE 갈럼석의 산출상태(한국광물학회지 Miner_v25n4p295)	35.199153 127.859558; 35.199153 127.864906; 35.195456 127.864906; 35.195456 127.859558
1199	PS103, SRP100A, SR6B, SR120	Distribution of Andong ultramafic complex and location of orthopyroxenite outcrops in two serpentinite quarries.	미상	EPMA; XRD	Distribution of Andong ultramafic complex and location of orthopyroxenite outcrops in two serpentinite quarries.	안동 초염기성암 복합체의 함금운모 사방휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1200	PS103, SRP100A, SR6B, SR120	Photomicrographs of orthopyroxenite. (a) Shinlip orthopyroxenite. (b) Pungsan orthopyroxenite. Am = amphibole, CPX = clinopyroxene, OPX = orthopyroxene, Pg = plagioclase, Ph = phlogopite, Zr = zircon. Cross-polarized light. Width of photographs : 25 mm.	미상	EPMA; XRD	Photomicrographs of orthopyroxenite. (a) Shinlip orthopyroxenite. (b) Pungsan orthopyroxenite. Am = amphibole, CPX = clinopyroxene, OPX = orthopyroxene, Pg = plagioclase, Ph = phlogopite, Zr = zircon. Cross-polarized light. Width of photographs : 25 mm.	안동 초염기성암 복합체의 함금운모 사방휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1201	PS103, SRP100A, SR6B, SR120	X-ray diffraction pattern of orthopyroxenite. Am = amphibole, Ch = chlorite, ChV = chlorite-vermiculite mixed-layer, Di = diopside, En = enstatite, Ph = phlogopite, S = serpentine, Tc = talc.	미상	EPMA; XRD	X-ray diffraction pattern of orthopyroxenite. Am = amphibole, Ch = chlorite, ChV = chlorite-vermiculite mixed-layer, Di = diopside, En = enstatite, Ph = phlogopite, S =	안동 초염기성암 복합체의 함금운모 사방 휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1202	PS103, SRP100A, SR6B, SR120	Scanning electron micrographs of the polished thin sections of orthopyroxenite. (a) Clinopyroxene exsolution lamella in orthopyroxene. Talc selectively replacing orthopyroxene. (b) Orthopyroxene islands in clinopyroxene. (c) Phlogopite in the interstices of orthopyroxene crystals. (d) Pentlandite inclusion in orthopyroxene. (e) Plagioclase filling the interstice of orthopyroxene crystals. Spinel inclusion in orthopyroxene. (f) Zircon inclusion in orthopyroxene. Ap = apatite, Ch = chlorite, CPX = clinopyroxene, OPX = orthopyroxene, Ph = phlogopite, S = serpentine, Spl = spinel, Tc = talc, Zr = zircon.	미상	EPMA; XRD	Scanning electron micrographs of the polished thin sections of orthopyroxenite. (a) Clinopyroxene exsolution lamella in orthopyroxene. Talc selectively replacing orthopyroxene. (b) Orthopyroxene islands in clinopyroxene. (c) Phlogopite in the interstices of orthopyroxene crystals. (d) Pentlandite inclusion in orthopyroxene. (e) Plagioclase filling the interstice of orthopyroxene crystals. Spinel inclusion in orthopyroxene. (f) Zircon inclusion in orthopyroxene. Ap = apatite, Ch = chlorite, CPX = clinopyroxene, OPX = orthopyroxene, Ph = phlogopite, S = serpentine, Spl = spinel, Tc = talc, Zr =	안동 초염기성암 복합체의 함금운모 사방 휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1203	PS103, SRP100A, SR6B, SR120	Chemical compositions of orthopyroxenite and serpentinite from the Andong ultramafic complex.	미상	EPMA; XRD	Chemical compositions of orthopyroxenite and serpentinite from the Andong ultramafic complex.	안동 초염기성암 복합체의 함금운모 사방 휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1204	PS103, SRP100A, SR6B, SR120	Chemical compositions of orthopyroxenes (enstatite) determined by electron microprobe analysis	미상	EPMA; XRD	Chemical compositions of orthopyroxenes (enstatite) determined by electron microprobe analysis	안동 초염기성암 복합체의 함금운모 사방 휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1205	PS103, SRP100A, SR6B, SR120	Chemical composition of clinopyroxene (diopside) determined by electron microprobe analysis.	미상	EPMA; XRD	Chemical composition of clinopyroxene (diopside) determined by electron microprobe analysis.	안동 초염기성암 복합체의 함금운모 사방 휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1206	PS103, SRP100A, SR6B, SR120	Chemical composition of phlogopite determined by electron microprobe analysis.	미상	EPMA; XRD	Chemical composition of phlogopite determined by electron microprobe analysis.	안동 초염기성암 복합체의 함금운모 사방 휘석암(한국광물학회지 Miner_v25n4p249)	36.533589 128.471042; 36.533589 128.513219; 36.524386 128.513219; 36.524386 128.471042
1207	T1, T2	Geologic map of Ulleung Island, modified from Min et al. (1988). Sampling points are marked as dots.	미상	EPMA, EDS, XRD	Geologic map of Ulleung Island, modified from Min et al. (1988). Sampling points are marked as dots.	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1208	T1, T2	Microphotographs of tachylite showing the characteristic glass texture and some phenocrysts. (A) Perlitic glass with microfault at NM (PPL). (B) Amygdules filled with spherulitic undulatory extinction at JD (CPL). (C) Zoned and twinned plagioclase phenocrysts at SG4 (CPL). (D) Boundary between dike (left) and tachylite (right) at way293 (PPL). (E) Boundary between tachylite (left) and basaltic dike (right) at way293 (PPL). (F) Partially palagonitized glass (dark) and plagioclase phenocrysts at GB (CPL). PPL: plane-polarized light; CPL: crossed polarized light.	미상	EPMA, EDS, XRD	Microphotographs of tachylite showing the characteristic glass texture and some phenocrysts. (A) Perlitic glass with microfault at NM (PPL). (B) Amygdules filled with spherulitic undulatory extinction at JD (CPL). (C) Zoned and twinned plagioclase phenocrysts at SG4 (CPL). (D) Boundary between dike (left) and tachylite (right) at way293 (PPL). (E) Boundary between tachylite (left) and basaltic dike (right) at way293 (PPL). (F) Partially palagonitized glass (dark) and plagioclase phenocrysts at GB (CPL). PPL: plane-polarized light; CPL: crossed polarized light.	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1209	T1, T2	XRD analysis of tachylite. B: biotite, H: hornblende, A: anorthoclase, T: titan.	미상	EPMA, EDS, XRD	XRD analysis of tachylite. B: biotite, H: hornblende, A: anorthoclase, T: titan.	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1210	T1, T2	SEM images showing various tachylite textures. (A), (B) Several lumps vary in size. (C) Rounded glassy surface. (D) Conchoidal fractures.	미상	EPMA, EDS, XRD	SEM images showing various tachylite textures. (A), (B) Several lumps vary in size. (C) Rounded glassy surface. (D) Conchoidal fractures.	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1211	T1, T2	SEM image of glassy surface of rounded globule and altered matrix. EDS data obtained from symbols (B) and (C) in the A-photo.	미상	EPMA, EDS, XRD	SEM image of glassy surface of rounded globule and altered matrix. EDS data obtained from symbols (B) and (C) in the A-photo.	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1212	T1, T2	BSE images and analyzed points in tachylite. (A) and (B) Points analyzed by WDS. (C) and (D) Points analyzed by EDS: Si 51.08, Al 15.73, O 33.19 at T3; Si 50.78, Al 15.46, O 33.76 at T4; Si 47.74, Al 15.08, Fe 5.27, O 31.90 at T5; Si 50.03, Al 14.88, Ca 1.14, Na 0.35, Mg 0.25, O 33.35 at T6; Si 48.75, Al 15.07, Ca 1.85, Na 0.96 at T7. B in (C) denotes biotite. Unit in atomic wt%.	미상	EPMA, EDS, XRD	BSE images and analyzed points in tachylite. (A) and (B) Points analyzed by WDS. (C) and (D) Points analyzed by EDS: Si 51.08, Al 15.73, O 33.19 at T3; Si 50.78, Al 15.46, O 33.76 at T4; Si 47.74, Al 15.08, Fe 5.27, O 31.90 at T5; Si 50.03, Al 14.88, Ca 1.14, Na 0.35, Mg 0.25, O 33.35 at T6; Si 48.75, Al 15.07, Ca 1.85, Na 0.96 at T7. B in (C) denotes biotite. Unit in atomic wt%.	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1213	T1, T2	SEM images of altered surfaces of tachylite. (A), (B) Cohesive mixture of iron hydroxides(oxides) and unknown silicates on glass matrix with EDS data of O 57.85; Na 1.34; Mg 1.02; Al 7.57; Si 22.62; Ca 0.48; Fe 9.12 (wt%). (C) Two types of hydroxide with high content of iron: small one with millet-like grains (less than 0.2 μ m in size) and large one with irregular cumulus (0.2~5 μ m in size). (D) Enlarged area of a box in (C).	미상	EPMA, EDS, XRD	SEM images of altered surfaces of tachylite. (A), (B) Cohesive mixture of iron hydroxides(oxides) and unknown silicates on glass matrix with EDS data of O 57.85; Na 1.34; Mg 1.02; Al 7.57; Si 22.62; Ca 0.48; Fe 9.12 (wt%). (C) Two types of hydroxide with high content of iron: small one with millet-like grains (less than 0.2 μ m in size) and large one with irregular cumulus (0.2~5 μ m in size). (D) Enlarged area of a box in (C).	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1214	T1, T2	SEM images showing curvature developed on the corner of glassy grains in tachylite and straight joints bisect the gap between grains. Note arrows.	미상	EPMA, EDS, XRD	SEM images showing curvature developed on the corner of glassy grains in tachylite and straight joints bisect the gap between grains. Note	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1215	T1, T2	Chemical compositions of the glassy matrix part in tachylite (by EPMA-WDS)	미상	EPMA, EDS, XRD	Chemical compositions of the glassy matrix part in tachylite (by EPMA-WDS)	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1216	T1, T2	Weight loss on ignition of the glassy matrix in tachylite	미상	EPMA, EDS, XRD	Weight loss on ignition of the glassy matrix in tachylite	울릉도의 하부층 현무암질 집괴암 층내 염기성 암맥에서 산출되는 타킬라이트의 광물학적 특성과 화산학적 의미(한국광물학회지 Miner_v25n2p063)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1217	1/2/27/18/16/25/26	Geological map of Ulleung Island (modified from Min et al., 1988) and sample sites.	Siroquant	XRD, FT-IR, EDS	Geological map of Ulleung Island (modified from Min et al., 1988) and sample sites.	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1218	1/2/27/18/16/25/26	X-ray diffraction patterns of pumice matrix. A: Anorthoclase, S: Sanidine.	Siroquant	XRD, FT-IR, EDS	X-ray diffraction patterns of pumice matrix. A: Anorthoclase, S: Sanidine.	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1219	1/2/27/18/16/25/26	FT-IR peak patterns of pumice matrix.	Siroquant	XRD, FT-IR, EDS	FT-IR peak patterns of pumice matrix.	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1220	1/2/27/18/16/25/26	Total alkalis vs. silica plotted for the pumice in the study area (after Le Maitre, 2002).	Siroquant	XRD, FT-IR, EDS	Total alkalis vs. silica plotted for the pumice in the study area (after Le Maitre, 2002).	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1221	1/2/27/18/16/25/26	SEM image showing textural characteristics of pumice. (a) Black pumice showing smooth small vesicles that have inflated into a large vesicle (Sample 1); (b) Vesiculate gray pumice with wrinkled and thin walls (Sample 16); (c) Vesiculate gray pumice including spherical cluster formed small vesicles (Sample 25); (d) Dense gray pumice with subangular to angular vesicle, hexagonal vesicle shown by arrow (Sample 26).	Siroquant	XRD, FT-IR, EDS	SEM image showing textural characteristics of pumice. (a) Black pumice showing smooth small vesicles that have inflated into a large vesicle (Sample 1); (b) Vesiculate gray pumice with wrinkled and thin walls (Sample 16); (c) Vesiculate gray pumice including spherical cluster formed small vesicles (Sample 25); (d) Dense gray pumice with subangular to angular vesicle, hexagonal vesicle shown by arrow (Sample 26).	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1222	1/2/27/18/16/25/26	SEM image (upper) and EDS spectrum (lower). (a) Black pumice (Sample 1) showing smooth wall and vesicle growth; (b) Brown pumice (Sample 2) with scattering submicron particle on surface; (c) Gray pumice (Sample 18) attaching dense submicron particles on interior vesicle; (d) Gray pumice (Sample 16); (e) Gray pumice (Sample 25) showing various oval vesicles; (f) Dense gray pumice (Sample 26). Arrows and a rectangle box indicate positions of point and area analysis, respectively.	Siroquant	XRD, FT-IR, EDS	SEM image (upper) and EDS spectrum (lower). (a) Black pumice (Sample 1) showing smooth wall and vesicle growth; (b) Brown pumice (Sample 2) with scattering submicron particle on surface; (c) Gray pumice (Sample 18) attaching dense submicron particles on interior vesicle; (d) Gray pumice (Sample 16); (e) Gray pumice (Sample 25) showing various oval vesicles; (f) Dense gray pumice (Sample 26). Arrows and a rectangle box indicate positions of point and area analysis, respectively.	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1223	1/2/27/18/16/25/26	Mineral compositions of pumice matrix calculated using XRD data with Rietveld method	Siroquant	XRD, FT-IR, EDS	Mineral compositions of pumice matrix calculated using XRD data with Rietveld method	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1224	1/2/27/18/16/25/26	FT-IR absorption band position (cm ⁻¹) of pumice matrix	Siroquant	XRD, FT-IR, EDS	FT-IR absorption band position (cm ⁻¹) of pumice matrix	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1225	1/2/27/18/16/25/26	Weight loss and temperature ranges on TG curves from pumice matrix	Siroquant	XRD, FT-IR, EDS	Weight loss and temperature ranges on TG curves from pumice matrix	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1226	1/2/27/18/16/25/26	Major elements of pumice matrix (unit in wt%)	Siroquant	XRD, FT-IR, EDS	Major elements of pumice matrix (unit in wt%)	울릉도 부석 기질의 암석·광물학적 특성 (한국광물학회지 Miner_v24n3p151)	37.559603 130.763003; 37.559603 130.957600; 37.444194 130.957600; 37.444194 130.763003
1227	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	X-ray diffractogram of bulk tailing samples (A), non-magnetic mineral samples (B) and magnetic mineral samples (C). Abbreviations: Q: quartz, Mv: muscovite, Ka: kaolinite, Mo: montmorillonite, I: illite, S: scorodite, C: calcite, G: galena, P: pyrite, Ap: arsenopyrite, Sp: sphalerite Mn: magnetite, He: hematite, Gt: goethite.	미상	XRD, EDS, ICP	X-ray diffractogram of bulk tailing samples (A), non-magnetic mineral samples (B) and magnetic mineral samples (C). Abbreviations: Q: quartz, Mv: muscovite, Ka: kaolinite, Mo: montmorillonite, I: illite, S: scorodite, C: calcite, G: galena, P: pyrite, Ap: arsenopyrite, Sp: sphalerite Mn: magnetite, He: hematite, Gt: goethite.	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1228	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Chemical speciation of As, Cd, Cu, Pb, Fe, and Mn in the tailing soil analyzed by sequential extraction method	미상	XRD, EDS, ICP	Chemical speciation of As, Cd, Cu, Pb, Fe, and Mn in the tailing soil analyzed by sequential extraction method	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1229	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Back-scattered electron (BSE) images (top) and the energy dispersive spectroscopy (EDS) spectra of galena, Sphalerite and resinous minerals.	미상	XRD, EDS, ICP	Back-scattered electron (BSE) images (top) and the energy dispersive spectroscopy (EDS) spectra of galena, Sphalerite and resinous minerals.	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1230	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Electron probe micro-analysis (EPMA) X-ray lines showing the distributions of Fe, S, O, As and Pb within galena.	미상	XRD, EDS, ICP	Electron probe micro-analysis (EPMA) X-ray lines showing the distributions of Fe, S, O, As and Pb within galena.	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1231	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Back-scattered electron (BSE) images (top) and the electron probe micro-analysis (EPMA) X-ray maps showing the distributions of S, Fe, As, O, Pb, Zn, and Si within galena and resinous minerals.	미상	XRD, EDS, ICP	Back-scattered electron (BSE) images (top) and the electron probe micro-analysis (EPMA) X-ray maps showing the distributions of S, Fe, As, O, Pb, Zn, and Si within galena and resinous minerals.	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1232	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Ternary diagram for S-Fe-As from EPMA data.	미상	XRD, EDS, ICP	Ternary diagram for S-Fe-As from EPMA data.	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1233	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Introduction of the Songcheon mine	미상	XRD, EDS, ICP	Introduction of the Songcheon mine	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1234	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Abundance of metallic luster (ml) and mineral color from magnetic and non-magnetic samples	미상	XRD, EDS, ICP	Abundance of metallic luster (ml) and mineral color from magnetic and non-magnetic samples	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1235	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Sequential extraction method used to examine chemical speciation of arsenic in tailing (Wenzel et al., 2001)	미상	XRD, EDS, ICP	Sequential extraction method used to examine chemical speciation of arsenic in tailing (Wenzel et al., 2001)	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1236	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Sequential extraction method used to examine chemical speciation of heavy metals in tailing (Tessier et al., 1979)	미상	XRD, EDS, ICP	Sequential extraction method used to examine chemical speciation of heavy metals in tailing (Tessier et al., 1979)	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1237	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Physicochemical properties, elemental concentrations, and mineralogy within the tailing samples used	미상	XRD, EDS, ICP	Physicochemical properties, elemental concentrations, and mineralogy within the tailing samples used	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1238	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	EPMA analytical results (wt%) for galena (Ga), pyrite (Py), sphalerite (Sp) and scorodite (Sc)	미상	XRD, EDS, ICP	EPMA analytical results (wt%) for galena (Ga), pyrite (Py), sphalerite (Sp) and scorodite (Sc)	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1239	Ga-01~13, Py-01~06, Sp-01~08, Sc-01~08	Elemental composition analyzed by EPMA for galena (1), sphalerite (2), and pyrite (3) shown in Fig. 4(C)	미상	XRD, EDS, ICP	Elemental composition analyzed by EPMA for galena (1), sphalerite (2), and pyrite (3) shown in Fig. 4(C)	송천광산의 풍화광미 내 중금속 및 비소 거동 특성(한국광물학회지 Miner_v23n2p125)	36.559306 128.778897; 36.559306 128.821436; 36.522542 128.821436; 36.522542 128.778897
1240	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	Location map of the study area. 1 = Dado mine, 2 = Ogchool mine, 3 = Seongsan mine, 4 = Goosi mine, 5 = Mingyung mine.	Siroquant ver. 3.0	XRD	Location map of the study area. 1 = Dado mine, 2 = Ogchool mine, 3 = Seongsan mine, 4 = Goosi mine, 5 = Mingyung mine.	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667
1241	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	Quarry of the Mingyung mine in the Nowhado from the bottom to the surface, pyrophyllite fm. with purple layer, silicified fm. and tuff fm. are found.	Siroquant ver. 3.0	XRD	Quarry of the Mingyung mine in the Nowhado from the bottom to the surface, pyrophyllite fm. with purple layer, silicified fm. and tuff fm. are	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1242	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	Some equilibrium relations showing the stability fields of kaolinite/pyrophyllite, muscovite and K-feldspar in the system K ₂ O-Al ₂ O ₃ -SiO ₂ -H ₂ O (Revised from Meyer & Hemley 1967). An oval part roughly indicate the degree of argillization process in the study areas.	Siroquant ver. 3.0	XRD	Some equilibrium relations showing the stability fields of kaolinite/pyrophyllite, muscovite and K-feldspar in the system K ₂ O-Al ₂ O ₃ -SiO ₂ -H ₂ O (Revised from Meyer & Hemley 1967). An oval part roughly indicate the degree of argillization process in the study areas.	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국 광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667
1243	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	X-ray powder diffraction patterns (Cu K α radiation) of (A) ores and (B) their related rocks in the Jeonnam pyrophyllite/kaolinite province (P = pyrophyllite, Q = quartz, K = kaolinite, Pl-f = plagioclase feldspars, D = diaspore, C = corundum).	Siroquant ver. 3.0	XRD	X-ray powder diffraction patterns (Cu K α radiation) of (A) ores and (B) their related rocks in the Jeonnam pyrophyllite/kaolinite province (P = pyrophyllite, Q = quartz, K = kaolinite, Pl-f = plagioclase feldspars, D = diaspore, C = corundum).	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국 광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667
1244	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	A generalized mineral paragenesis of the major formations in the Jeonnam pyrophyllite/kaolinite province. Younger formations are arranged in a ascending order. Dot means the sporadical presence of the minerals in its formation.	Siroquant ver. 3.0	XRD	A generalized mineral paragenesis of the major formations in the Jeonnam pyrophyllite/kaolinite province. Younger formations are arranged in a ascending order. Dot means the sporadical presence of the minerals in its	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국 광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667
1245	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	Simplified geology in the vicinities of the pyrophyllite/kaolinite deposits in the Jeonnam province	Siroquant ver. 3.0	XRD	Simplified geology in the vicinities of the pyrophyllite/kaolinite deposits in the Jeonnam province	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국 광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667
1246	Lithic tuff, Fine tuff, Upper siliceous fm, lower. seilic. fm, Ore fm	Quantification for the mineral species of the major formations in the Mingyung pyrophyllite deposit	Siroquant ver. 3.0	XRD	Quantification for the mineral species of the major formations in the Mingyung pyrophyllite deposit	전남일원 납석광상의 광물학적 특성과 효과적 탐사를 위한 Key Beds의 선정(한국 광물학회지 Miner_v22n4p297)	35.500000 125.066667; 35.500000 127.900000; 33.900000 127.900000; 33.900000 125.066667
1247	UKI~III	Location and geological map of the study area showing the Korea Amethyst mine (after Kim et al., 1963).	미상	가열/냉각대	Location and geological map of the study area showing the Korea Amethyst mine (after Kim et al., 1963).	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1248	UKI~III	Photomicrographs showing various textures of the host biotite Buncheon granite gneiss. The scale bar in (d) applies for all pictures. (a) Interstitial biotite surrounding quartz grains forming mantle-core texture. (b) Two-feldspar granite gneiss with interstitial quartz. (c) and (d) Zircon and apatite associated with biotite. Photos a and c were taken under plain-polarized light; b and d under cross-polarized light. Q = quartz, Bi = biotite, Mi = microcline, Pl = plagioclase, Zr = zircon, Ap = apatite.	미상	가열/냉각대	Photomicrographs showing various textures of the host biotite Buncheon granite gneiss. The scale bar in (d) applies for all pictures. (a) Interstitial biotite surrounding quartz grains forming mantle-core texture. (b) Two-feldspar granite gneiss with interstitial quartz. (c) and (d) Zircon and apatite associated with biotite. Photos a and c were taken under plain-polarized light; b and d under cross-polarized light. Q = quartz, Bi = biotite, Mi = microcline, Pl = plagioclase, Zr = zircon, Ap = apatite.	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1249	UKI~III	Photomicrographs showing recrystallized textures of the amethystine quartz from the Korea Amethyst pegmatite. The scale bar in (d) applies for all pictures. (a) and (b) An euhedral coarse-grained quartz crystal with growth zones showing fine-grained subgrains. (c) and (d) Subgrains along the growth zones which is highly altered. Photos a and c were taken under plain-polarized light; b and d under cross-polarized light.	미상	가열/냉각대	Photomicrographs showing recrystallized textures of the amethystine quartz from the Korea Amethyst pegmatite. The scale bar in (d) applies for all pictures. (a) and (b) An euhedral coarse-grained quartz crystal with growth zones showing fine-grained subgrains. (c) and (d) Subgrains along the growth zones which is highly altered. Photos a and c were taken under plain-polarized light; b and d under cross-polarized light.	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1250	UKI~III	A photo showing multi-grown quartz crystal with (a) clear, (b) amethystine, and (c) milky zone. The dotted lines indicate cut-off directions perpendicular to the C-axis of the crystal.	미상	가열/냉각대	A photo showing multi-grown quartz crystal with (a) clear, (b) amethystine, and (c) milky zone. The dotted lines indicate cut-off directions perpendicular to the C-axis of the crystal.	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1251	UKI~III	Photomicrographs showing fluid inclusions trapped within the Korea amethyst. All photographs were taken at room temperature. (a) Isolated liquidich inclusions (Type I), (b) Low-temperature inclusions without vapor bubbles, (c) Type II vapor-rich inclusion, (d) Type III inclusion with unidentified daughter crystal plus sylvite. L = liquid, V = vapor, S = sylvite, U = unidentified daughter crystal.	미상	가열/냉각대	Photomicrographs showing fluid inclusions trapped within the Korea amethyst. All photographs were taken at room temperature. (a) Isolated liquidich inclusions (Type I), (b) Low-temperature inclusions without vapor bubbles, (c) Type II vapor-rich inclusion, (d) Type III inclusion with unidentified daughter crystal plus sylvite. L = liquid, V = vapor, S = sylvite, U = unidentified daughter crystal.	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1252	UKI~III	Homogenization temperatures for type I, II, and III fluid inclusions.	미상	가열/냉각대	Homogenization temperatures for type I, II, and III fluid inclusions.	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1253	UKI~III	Relationship between salinity (in wt% NaCl equivalent) and homogenization temperatures for type I, II, and III fluid inclusions.	미상	가열/냉각대	Relationship between salinity (in wt% NaCl equivalent) and homogenization temperatures for type I, II, and III fluid inclusions.	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1254	UKI~III	Summary of microthermometry of fluid inclusions trapped in quartz from the Korea pegmatite	미상	가열/냉각대	Summary of microthermometry of fluid inclusions trapped in quartz from the Korea pegmatite	경북 울진 코리아 광상의 자수정에 대한 유체포유물 연구(한국광물학회지 Miner_v22n3p207)	36.9812 129.178264
1255	UC-1	Aggregates of stellerite. (a) Random and radial distributions around tourmaline, (b) Coated with Fe-oxide derived from weathered tourmaline. Crystal size with 3~4 mm length and 1~2 mm width.	미상	XRD, SEM, DSC	Aggregates of stellerite. (a) Random and radial distributions around tourmaline, (b) Coated with Fe-oxide derived from weathered tourmaline. Crystal size with 3~4 mm length and 1~2 mm width.	경북 청도군 유천화강암 내 제올라이트 광물군 스텔러라이트의 산출과 광물학적 특징(한국광물학회지 Miner_v21n4p365)	35.590819 128.725544; 35.590819 128.743683; 35.576758 128.743683; 35.576758 128.725544
1256	UC-1	Morphology of stellerite associated with tourmaline. (a), (b) Randomly oriented stellerite, (c) Tourmaline and stellerite, (d) Distinct 110 face on stellerite (see upper center crystal). Crystal size with 3~4 mm length and 1~2 mm width.	미상	XRD, SEM, DSC	Morphology of stellerite associated with tourmaline. (a), (b) Randomly oriented stellerite, (c) Tourmaline and stellerite, (d) Distinct 110 face on stellerite (see upper center crystal). Crystal size with 3~4 mm length and 1~2 mm width.	경북 청도군 유천화강암 내 제올라이트 광물군 스텔러라이트의 산출과 광물학적 특징(한국광물학회지 Miner_v21n4p365)	35.590819 128.725544; 35.590819 128.743683; 35.576758 128.743683; 35.576758 128.725544

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1257	UC-1	XRD diffraction pattern of stellerite associated with the Yucheon Granite.	미상	XRD, SEM, DSC	XRD diffraction pattern of stellerite associated with the Yucheon Granite.	경북 청도군 유천화강암 내 제올라이트 광물군 스텔러라이트의 산출과 광물학적 특징(한국광물학회지 Miner_v21n4p365)	35.590819 128.725544; 35.590819 128.743683; 35.576758 128.743683; 35.576758 128.725544
1258	UC-1	SEM images of stellerite. (a), (b): Z-1; (c), (d): Z-2; (e), (f): Z-3.	미상	XRD, SEM, DSC	SEM images of stellerite. (a), (b): Z-1; (c), (d): Z-2; (e), (f): Z-3.	경북 청도군 유천화강암 내 제올라이트 광물군 스텔러라이트의 산출과 광물학적 특징(한국광물학회지 Miner_v21n4p365)	35.590819 128.725544; 35.590819 128.743683; 35.576758 128.743683; 35.576758 128.725544
1259	UC-1	Thermal analyses of stellerite.	미상	XRD, SEM, DSC	Thermal analyses of stellerite.	경북 청도군 유천화강암 내 제올라이트 광물군 스텔러라이트의 산출과 광물학적 특징(한국광물학회지 Miner_v21n4p365)	35.590819 128.725544; 35.590819 128.743683; 35.576758 128.743683; 35.576758 128.725544
1260	UC-1	Fourier transform infrared spectrum of stellerite.	미상	XRD, SEM, DSC	Fourier transform infrared spectrum of stellerite.	경북 청도군 유천화강암 내 제올라이트 광물군 스텔러라이트의 산출과 광물학적 특징(한국광물학회지 Miner_v21n4p365)	35.590819 128.725544; 35.590819 128.743683; 35.576758 128.743683; 35.576758 128.725544
1261	GNW1~3, GRW1~3	Microphotography of biotite gneiss (A, B and C) and granite (D, E and F).	미상	XRF, XRD	Microphotography of biotite gneiss (A, B and C) and granite (D, E and F).	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1262	GNW1~3, GRW1~3	X-ray diffraction patterns of biotite gneiss according to weathering grade (Bt: biotite, Qz: quartz, Ha: halloysite, Ab: albite) GNW1 (fresh), GNW2 (moderately weathered), GNW3 (highly weathered).	미상	XRF, XRD	X-ray diffraction patterns of biotite gneiss according to weathering grade (Bt: biotite, Qz: quartz, Ha: halloysite, Ab: albite) GNW1 (fresh), GNW2 (moderately weathered), GNW3 (highly weathered).	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1263	GNW1~3, GRW1~3	X-ray diffraction patterns of halloysite in biotite gneiss heated at given temperature for 3 hours.	미상	XRF, XRD	X-ray diffraction patterns of halloysite in biotite gneiss heated at given temperature for 3 hours.	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1264	GNW1~3, GRW1~3	X-ray diffraction patterns of granite according to weathering grade (Il: illite, Mu: muscovite, Qz: quartz, Ka: kaolinite, Ab: albite) GRW1 (fresh), GRW2 (moderately weathered), GRW3 (highly weathered).	미상	XRF, XRD	X-ray diffraction patterns of granite according to weathering grade (Il: illite, Mu: muscovite, Qz: quartz, Ka: kaolinite, Ab: albite) GRW1 (fresh), GRW2 (moderately weathered), GRW3 (highly weathered).	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1265	GNW1~3, GRW1~3	X-ray diffraction patterns of illite and kaolinite in granite heated at given temperature for 3 hours.	미상	XRF, XRD	X-ray diffraction patterns of illite and kaolinite in granite heated at given temperature for 3 hours.	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1266	GNW1~3, GRW1~3	Variation of major elements with weathering grade (FR: fresh, MW: moderate weathered, HW: highly weathered).	미상	XRF, XRD	Variation of major elements with weathering grade (FR: fresh, MW: moderate weathered, HW: highly weathered).	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1267	GNW1~3, GRW1~3	Quantitative analysis with weathering grade of biotite gneiss	미상	XRF, XRD	Quantitative analysis with weathering grade of biotite gneiss	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1268	GNW1~3, GRW1~3	Quantitative analysis with weathering grade of granite	미상	XRF, XRD	Quantitative analysis with weathering grade of granite	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833
1269	GNW1~3, GRW1~3	Whole rock analysis of weathering profile with weathering grade from biotite gneiss (GNW) and granite (GRW)	미상	XRF, XRD	Whole rock analysis of weathering profile with weathering grade from biotite gneiss (GNW) and granite (GRW)	강화도 선두리 지역 흑운모 편마암과 화강암에 대한 풍화 특성(한국광물학회지 Miner_v19n1p039)	37.636389 126.470833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1270	3319/3320/3322, 2002a/b/c/d/e/f/g/h/i/j	Simplified regional geologic map of the northeastern Yeongnam Massif and the location (Lo) of the outcrop in this study.	미상	XRF, ICP-MS	Simplified regional geologic map of the northeastern Yeongnam Massif and the location (Lo) of the outcrop in this study.	강원도 임원지역 우백질 화강편마암에 나타난 희토류원소 테트라드 효과의 지구화학적 의미(한국광물학회지 Miner_v16n1p027)	37.237333 129.330000; 37.237333 129.330333; 37.236667 129.330333; 37.236667 129.330000
1271	3319/3320/3322, 2002a/b/c/d/e/f/g/h/i/j	Chondrite-normalized REE patterns (Masuda et al., 1973; Masuda, 1975) for the samples at the outcrop in Fig. 2. (a) and (b): leucocratic granite gneiss, (c): leucocratic-pegmatitic granite gneiss (d): weathered biotite gneisses. The samples in (a) and (c) were measured by ID-TIMS (JEOL 05-RB mass spectrometer). The samples in (b) and (d) were measured by ICP-MS.	미상	XRF, ICP-MS	Chondrite-normalized REE patterns (Masuda et al., 1973; Masuda, 1975) for the samples at the outcrop in Fig. 2. (a) and (b): leucocratic granite gneiss, (c): leucocratic-pegmatitic granite gneiss (d): weathered biotite gneisses. The samples in (a) and (c) were measured by ID-TIMS (JEOL 05-RB mass spectrometer). The samples in (b) and (d) were measured by ICP-MS.	강원도 임원지역 우백질 화강편마암에 나타난 희토류원소 테트라드 효과의 지구화학적 의미(한국광물학회지 Miner_v16n1p027)	37.237333 129.330000; 37.237333 129.330333; 37.236667 129.330333; 37.236667 129.330000
1272	3319/3320/3322, 2002a/b/c/d/e/f/g/h/i/j	A plot of the degree of REE tetrad effect (T1, Monecke et al., 2002) vs. (a) Eu/Eu*, and (b) Y/Ho.	미상	XRF, ICP-MS	A plot of the degree of REE tetrad effect (T1, Monecke et al., 2002) vs. (a) Eu/Eu*, and (b) Y/Ho.	강원도 임원지역 우백질 화강편마암에 나타난 희토류원소 테트라드 효과의 지구화학적 의미(한국광물학회지 Miner_v16n1p027)	37.237333 129.330000; 37.237333 129.330333; 37.236667 129.330333; 37.236667 129.330000
1273	3319/3320/3322, 2002a/b/c/d/e/f/g/h/i/j	(a) Chondrite normalized Rb-Sr-Ba and REE pattern (Masuda et al., 1973; Masuda, 1975) of leucocratic granite gneiss measured by ID-TIMS. (b) Chondrite normalized Rb-Sr-Ba and REE pattern of leucocratic-pegmatitic gneisses measured by ID-TIMS. (c) A plot of Ca/Sr vs. Eu/Eu*, (d) A plot of Ca/Sr vs. K/Ba.	미상	XRF, ICP-MS	(a) Chondrite normalized Rb-Sr-Ba and REE pattern (Masuda et al., 1973; Masuda, 1975) of leucocratic granite gneiss measured by ID-TIMS. (b) Chondrite normalized Rb-Sr-Ba and REE pattern of leucocratic-pegmatitic gneisses measured by ID-TIMS. (c) A plot of Ca/Sr vs. Eu/Eu*, (d) A plot of	강원도 임원지역 우백질 화강편마암에 나타난 희토류원소 테트라드 효과의 지구화학적 의미(한국광물학회지 Miner_v16n1p027)	37.237333 129.330000; 37.237333 129.330333; 37.236667 129.330333; 37.236667 129.330000
1274	3319/3320/3322, 2002a/b/c/d/e/f/g/h/i/j	Samples and their status	미상	XRF, ICP-MS	Samples and their status	강원도 임원지역 우백질 화강편마암에 나타난 희토류원소 테트라드 효과의 지구화학적 의미(한국광물학회지 Miner_v16n1p027)	37.237333 129.330000; 37.237333 129.330333; 37.236667 129.330333; 37.236667 129.330000
1275	3319/3320/3322, 2002a/b/c/d/e/f/g/h/i/j	Major element composition (wt. %) and REE, Sr, Rb, Ba abundances (ppm) for the leucocratic granite gneiss and biotite gneiss from Imweon area, Korea. GR: leucocratic granite gneiss, QTZ: leucocratic-pegmatitic granite gneiss, SCH: biotite gneiss, (S): soil	미상	XRF, ICP-MS	Major element composition (wt. %) and REE, Sr, Rb, Ba abundances (ppm) for the leucocratic granite gneiss and biotite gneiss from Imweon area, Korea. GR: leucocratic granite gneiss, QTZ: leucocratic-pegmatitic granite gneiss, SCH: biotite gneiss, (S): soil	강원도 임원지역 우백질 화강편마암에 나타난 희토류원소 테트라드 효과의 지구화학적 의미(한국광물학회지 Miner_v16n1p027)	37.237333 129.330000; 37.237333 129.330333; 37.236667 129.330333; 37.236667 129.330000
1276	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	(a) Distribution of the Bulguksa Granite in the Gyeongsang Basin (modified from Chough and Sohn, 2010; Kim et al., 2016; Cheong and Jo, 2017). The dashed line indicates a trace of the Yangsan Fault. The narrow arrows represent some granitic bodies used for comparison. Study area is indicated as the red box with thick arrow. (b) The geological map of study area (modified from Lee et al., 2020).	미상	EPMA, ICP-MS	(a) Distribution of the Bulguksa Granite in the Gyeongsang Basin (modified from Chough and Sohn, 2010; Kim et al., 2016; Cheong and Jo, 2017). The dashed line indicates a trace of the Yangsan Fault. The narrow arrows represent some granitic bodies used for comparison. Study area is indicated as the red box with thick arrow. (b) The geological map of study area (modified from Lee et al.,	규장길 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1277	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Petrography of (a and b) the Moa Granite, (c and d) Bomun Granite and (e and f) Dongcheon Granite and (g and h) their accessory minerals. (a), (b), (c) and (e) are cross-polarized light images. (d), (f) and (h) are back-scattered electron (BSE) images. The upper half of (f) is energy-dispersive spectrometric (EDS) Na ka-mapping result. (g) is an EDS phase map for accessory phases. The red arrows represent alkali-feldspar overgrowth on the plagioclase antecrystic core. The blue arrows indicate a skeletal growth of quartz crystals. Note that the contacting relationships of euhedral to subhedral crystals are observed as plagioclase in (a) and alkali-feldspar in (c). Abbreviations (Whitney and Evans, 2010): Ab-Albite; Afs-Alkali-feldspar; Ap-Apatite; Arf-Arvedsonite; Or-Orthoclase; Pl-Plagioclase; Qz-Quartz; Spn-Sphene; Thr-Thorite; Zrn-Zircon.	미상	EPMA, ICP-MS	Petrography of (a and b) the Moa Granite, (c and d) Bomun Granite and (e and f) Dongcheon Granite and (g and h) their accessory minerals. (a), (b), (c) and (e) are cross-polarized light images. (d), (f) and (h) are back-scattered electron (BSE) images. The upper half of (f) is energy-dispersive spectrometric (EDS) Na ka-mapping result. (g) is an EDS phase map for accessory phases. The red arrows represent alkali-feldspar overgrowth on the plagioclase antecrystic core. The blue arrows indicate a skeletal growth of quartz crystals. Note that the contacting relationships of euhedral to subhedral crystals are observed as plagioclase in (a) and alkali-feldspar in (c). Abbreviations (Whitney and Evans, 2010): Ab-Albite; Afs-Alkali-feldspar; Ap-Apatite; Arf-Arvedsonite; Or-Orthoclase; Pl-Plagioclase; Qz-Quartz; Spn-Sphene;	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1278	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Compositional variations of (a) feldspar and (b) biotite. Biotite classification follows the scheme (O = 11) proposed by Tischendorf et al. (2004). Note that lithium abundance was assumed zero. The inset BSE image shows no compositional zoning structure. Previous plagioclase and biotite data are from Koh (2001), Lee et al. (1995) and Myeong (2017). Alkali-feldspar granite includes the Namsan and Dongcheon Granite. Bt-bearing granite represents the Gyeongju Granite. Hbl-bearing granodiorite is the Tohamsan Granite. See Figure 1a for the locations.	미상	EPMA, ICP-MS	Compositional variations of (a) feldspar and (b) biotite. Biotite classification follows the scheme (O = 11) proposed by Tischendorf et al. (2004). Note that lithium abundance was assumed zero. The inset BSE image shows no compositional zoning structure. Previous plagioclase and biotite data are from Koh (2001), Lee et al. (1995) and Myeong (2017). Alkali-feldspar granite includes the Namsan and Dongcheon Granite. Bt-bearing granite represents the Gyeongju Granite. Hbl-bearing granodiorite is the Tohamsan Granite.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1279	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	The geochemical classification of granitic rocks (Frost, B.R. et al., 2001; Frost, C.D. et al., 2016). (a) Fe* (FeOtotal / (FeOtotal + MgO)) and (b) MALI (modified alkali-lime index = Na2O + K2O - CaO) versus SiO2 diagram. (c) Alumina saturation diagram (A/NK = molar Al2O3 / (Na2O + K2O) versus A/CNK = molar Al2O3 / (CaO + Na2O + K2O). Abbreviations: An-Anorthite; Ab-Albite; Or-Orthoclase. Previous data are from: Alkali-feldspar granite (i.e., Namsan and Dongcheon Granite; Lee et al., 1995; Koh et al., 1996; Kim and Kim, 1997; Lee and Hwang, 1999; Koh, 2001; Hwang, 2004; Cheong and Jo, 2017; Myeong et al., 2017, 2018), Biotite-bearing granite (i.e., Gyeongju Granite; Lee et al., 1995; Koh et al., 1996; Kim and Kim, 1997; Lee and Hwang, 1999; Koh, 2001; Hwang, 2004; Cheong and Jo, 2017), Hornblende-bearing granodiorite (Tohamsan Granite; Lee et al., 1995; Kim and Kim, 1997; Lee and Hwang, 1999; Koh, 2001; Hwang, 2004; Cheong and Jo, 2017) and the Peninsula Ranges Batholith, USA, as a well-known arc-setting calc-alkaline granitic batholith (Lee et al., 2007).	미상	EPMA, ICP-MS	The geochemical classification of granitic rocks (Frost, B.R. et al., 2001; Frost, C.D. et al., 2016). (a) Fe* (FeOtotal / (FeOtotal + MgO)) and (b) MALI (modified alkali-lime index = Na2O + K2O - CaO) versus SiO2 diagram. (c) Alumina saturation diagram (A/NK = molar Al2O3 / (Na2O + K2O) versus A/CNK = molar Al2O3 / (CaO + Na2O + K2O). Abbreviations: An-Anorthite; Ab-Albite; Or-Orthoclase. Previous data are from: Alkali-feldspar granite (i.e., Namsan and Dongcheon Granite; Lee et al., 1995; Koh et al., 1996; Kim and Kim, 1997; Lee and Hwang, 1999; Koh, 2001; Hwang, 2004; Cheong and Jo, 2017; Myeong et al., 2017, 2018), Biotite-bearing granite (i.e., Gyeongju Granite; Lee et al., 1995; Koh et al., 1996; Kim and Kim, 1997; Lee and Hwang, 1999; Koh, 2001; Hwang, 2004; Cheong and Jo, 2017), Hornblende-bearing granodiorite (Tohamsan Granite; Lee et al., 1995; Kim and Kim, 1997; Lee and Hwang, 1999; Koh, 2001; Hwang, 2004; Cheong and Jo, 2017) and the Peninsula Ranges Batholith, USA, as a well-known	규장질 누적암과 용융체의 불안전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1280	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Major elements variations of the Moa, Bomun and Dongcheon Granite. The previous data source is provided in the Figure 5 caption.	미상	EPMA, ICP-MS	Major elements variations of the Moa, Bomun and Dongcheon Granite. The previous data source is provided in the Figure 5 caption.	규장질 누적암과 용융체의 불안전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1281	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Trace elements variations of the Moa, Bomun and Dongcheon Granite. The partition coefficients (Kd) are from Stix and Gorton (1990), Ewart and Griffin (1994), Sano et al. (2002) and Rollinson and Pease (2021). Bulk partition coefficients (Di) were based on the average modal composition of the Moa and Bomun Granite (Table 1; 43.6% Afs, 34.6%Qz, 19.8% Pl and 2.0% Bt), assuming fully incompatible behavior of the trace elements for the quartz (i.e., Kd for Qz is assumed zero) (Table 5). The previous data source is provided in the Figure 5 caption.	미상	EPMA, ICP-MS	Trace elements variations of the Moa, Bomun and Dongcheon Granite. The partition coefficients (Kd) are from Stix and Gorton (1990), Ewart and Griffin (1994), Sano et al. (2002) and Rollinson and Pease (2021). Bulk partition coefficients (Di) were based on the average modal composition of the Moa and Bomun Granite (Table 1; 43.6% Afs, 34.6%Qz, 19.8% Pl and 2.0% Bt), assuming fully incompatible behavior of the trace elements for the quartz (i.e., Kd for Qz is assumed zero) (Table 5). The previous data source is provided in the Figure 5 caption.	규장질 누적암과 용융체의 불안전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003

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1282	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	(a) Primitive mantle (Sun and McDonough, 1989) and (b) C1 Chondrite (Sun and McDonough, 1989)-normalized patterns of the Moa, Bomun and Dongcheon Granite. The trace elements compositions of the average continental crust are from Rudnick and Gao (2014). (c) The samples with tetrad effect in the third segment of rare earth elements. Ti index was calculated from the equation (2) in Monecke et al. (2002).	미상	EPMA, ICP-MS	(a) Primitive mantle (Sun and McDonough, 1989) and (b) C1 Chondrite (Sun and McDonough, 1989)-normalized patterns of the Moa, Bomun and Dongcheon Granite. The trace elements compositions of the average continental crust are from Rudnick and Gao (2014). (c) The samples with tetrad effect in the third segment of rare earth elements. Ti index was calculated from the equation (2) in Monecke et al.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1283	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	SHRIMP (Sensitive High Resolution Ion MicroProbe) U-Pb zircon age compilation. Previous data are from: Hornblende-bearing granodiorite (i.e., Tohamsan Granite; Cheong et al., 2013; Cheong and Jo, 2017), Biotite-bearing granite (i.e., Gyeongju Granite; Cheong and Jo, 2017; Lee et al., 2020, Unpublished data) and Alkali-feldspar granite (i.e., Namsan and Dongcheon Granite; Jo et al., 2016; Lee et al., 2020, Unpublished data).	미상	EPMA, ICP-MS	SHRIMP (Sensitive High Resolution Ion MicroProbe) U-Pb zircon age compilation. Previous data are from: Hornblende-bearing granodiorite (i.e., Tohamsan Granite; Cheong et al., 2013; Cheong and Jo, 2017), Biotite-bearing granite (i.e., Gyeongju Granite; Cheong and Jo, 2017; Lee et al., 2020, Unpublished data) and Alkali-feldspar granite (i.e., Namsan and Dongcheon Granite; Jo et al., 2016; Lee et al., 2020,	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1284	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	(a) HFSEs versus SiO ₂ diagram. Note that the tantalum diagram has log-scale vertical axis. (b) T3 versus T4 index (based on the equation (2) in Monecke et al., 2002) diagram for testing the REEs tetrad effect.	미상	EPMA, ICP-MS	(a) HFSEs versus SiO ₂ diagram. Note that the tantalum diagram has log-scale vertical axis. (b) T3 versus T4 index (based on the equation (2) in Monecke et al., 2002) diagram for testing the REEs tetrad effect.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1285	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	The result of data filtering for alkali-feldspar granite, biotite-bearing granite and hornblende-bearing granodiorite. The previous data source is provided in the Figure 5 caption and the filtering results are summarized in Table 6. Samples S11-3, S21-15 and S21-7d are shown for comparison. Note that the previous data set presented in the Figures 5-7 are the survived ones from the data filtering criteria of this study.	미상	EPMA, ICP-MS	The result of data filtering for alkali-feldspar granite, biotite-bearing granite and hornblende-bearing granodiorite. The previous data source is provided in the Figure 5 caption and the filtering results are summarized in Table 6. Samples S11-3, S21-15 and S21-7d are shown for comparison. Note that the previous data set presented in the Figures 5-7 are the survived ones from the data filtering criteria of this study.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003

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1286	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	(a) F (wt.%) abundance with respect to the decreasing biotite Mg# (See also, Table 3). (b) Modeled interstitial F (wt.%) abundance using KdFbt-Melt of Icenhower and London (1997). Biotite compositions are from alkali-feldspar granite (Lee et al., 1995; Myeong, 2017), biotite-bearing granite (Lee et al., 1995; Myeong, 2017) and hornblende-bearing granodiorite (Lee et al., 1995). Note that biotite crystals in the Dongcheon Granite have low oxides totals less than 90 wt.% with low K abundance, which may indicate alteration into chlorite \pm Fe-hydroxides; thus, they were not used in this study.	미상	EPMA, ICP-MS	(a) F (wt.%) abundance with respect to the decreasing biotite Mg# (See also, Table 3). (b) Modeled interstitial F (wt.%) abundance using KdFbt-Melt of Icenhower and London (1997). Biotite compositions are from alkali-feldspar granite (Lee et al., 1995; Myeong, 2017), biotite-bearing granite (Lee et al., 1995; Myeong, 2017) and hornblende-bearing granodiorite (Lee et al., 1995). Note that biotite crystals in the Dongcheon Granite have low oxides totals less than 90 wt.% with low K abundance, which may indicate alteration into chlorite \pm Fe-hydroxides;	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1287	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	(a) Zr, Y and Nb versus Rb/Sr diagram. The thick white arrow represents an intermediate melt evolution to form felsic parental magma with a more evolved composition (i.e., sample S11-3 from the Moa Granite). The black and gray curves with crosses (10% interval), respectively, indicate the modeled melt and cumulate compositions. The red curve assumes completely incompatible behaviors (i.e., $DZr, Y, Nb = 0$). The black broken arrow is a possible result of zircon dissolution, liberating some HFSEs compatible with zircon. (b) Modeled compositions of the melt and complementary felsic cumulate. Note that the model parameters are summarized in Table 5 and the previous data source is provided in the Figure 5 caption.	미상	EPMA, ICP-MS	(a) Zr, Y and Nb versus Rb/Sr diagram. The thick white arrow represents an intermediate melt evolution to form felsic parental magma with a more evolved composition (i.e., sample S11-3 from the Moa Granite). The black and gray curves with crosses (10% interval), respectively, indicate the modeled melt and cumulate compositions. The red curve assumes completely incompatible behaviors (i.e., $DZr, Y, Nb = 0$). The black broken arrow is a possible result of zircon dissolution, liberating some HFSEs compatible with zircon. (b) Modeled compositions of the melt and complementary felsic cumulate. Note that the model parameters are summarized in Table 5 and the previous data source is provided in the Figure 5	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1288	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Tectonic discrimination diagram for granitic rocks (Pearce et al., 1984) in the study area. The black and gray curves with crosses (10% interval), respectively, indicate the modeled melt and cumulate compositions. The black broken arrow is a possible result of zircon dissolution. The previous data source is provided in the Figure 5 caption. Abbreviations: ORG-Ocean Ridge Granites; VAG-Volcanic Arc Granites; WPG-Within Plate Granites; Syn-COLG-Syn-collision Granites.	미상	EPMA, ICP-MS	Tectonic discrimination diagram for granitic rocks (Pearce et al., 1984) in the study area. The black and gray curves with crosses (10% interval), respectively, indicate the modeled melt and cumulate compositions. The black broken arrow is a possible result of zircon dissolution. The previous data source is provided in the Figure 5 caption. Abbreviations: ORG-Ocean Ridge Granites; VAG-Volcanic Arc Granites; WPG-Within Plate Granites; Syn-COLG-Syn-collision	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003

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1289	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Modal compositions (%) of the Moa, Bomun and Dongcheon Granite.	미상	EPMA, ICP-MS	Modal compositions (%) of the Moa, Bomun and Dongcheon Granite.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백 질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1290	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Representative feldspar compositions of this study.	미상	EPMA, ICP-MS	Representative feldspar compositions of this study.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백 질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1291	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Representative biotite compositions of this study.	미상	EPMA, ICP-MS	Representative biotite compositions of this study.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백 질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1292	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Whole-rock geochemical data.	미상	EPMA, ICP-MS	Whole-rock geochemical data.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백 질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1293	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	Fractional crystallization model parameters used in this study.	미상	EPMA, ICP-MS	Fractional crystallization model parameters used in this study.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백 질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1294	3-27, 2-37, 3-28, 2-38, 2-31, 9-7, 3-22, 9-9, 13-3, 14-21	The results of data filtering for alkali-feldspar granite, biotite-bearing granite and hornblende-bearing granodiorite in the study area.	미상	EPMA, ICP-MS	The results of data filtering for alkali-feldspar granite, biotite-bearing granite and hornblende-bearing granodiorite in the study area.	규장질 누적암과 용융체의 불완전 분리를 통한 고-실리카 화강암의 형성에 대한 예비연구: 경주 일대 양산단층 동부의 우백 질 화강암(지질학회지 Geol_v59n4p585)	35.975183 129.192003; 35.975183 129.336367; 35.788172 129.336367; 35.788172 129.192003
1295	GG17/60/91/99	Geological map around the Hwasan caldera, showing locality of samples for the SHRIMP U-Pb zircon dating. Index map shows the range of Yeongyang (Y), Uiseong (U) and Yucheon (YC) sub-basins in the Kyeongsang Basin.	미상	EDS, SHRIMP	Geological map around the Hwasan caldera, showing locality of samples for the SHRIMP U-Pb zircon dating. Index map shows the range of Yeongyang (Y), Uiseong (U) and Yucheon (YC) sub-basins in the Kyeongsang Basin.	군위군 동부 고로화산암복합체의 SHRIMP 저어콘 U-Pb연령과 칼데라 형성 과정(지질학회지 Geol_v59n3p303)	36.250000 128.666667; 36.250000 128.916667; 36.000000 128.916667; 36.000000 128.666667
1296	GG17/60/91/99	Representative cathodoluminescence images of the analyzed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma	미상	EDS, SHRIMP	Representative cathodoluminescence images of the analyzed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma	군위군 동부 고로화산암복합체의 SHRIMP 저어콘 U-Pb연령과 칼데라 형성 과정(지질학회지 Geol_v59n3p303)	36.250000 128.666667; 36.250000 128.916667; 36.000000 128.916667; 36.000000 128.666667
1297	GG17/60/91/99	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the analyzed zircons in the study.	미상	EDS, SHRIMP	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the analyzed zircons in the study.	군위군 동부 고로화산암복합체의 SHRIMP 저어콘 U-Pb연령과 칼데라 형성 과정(지질학회지 Geol_v59n3p303)	36.250000 128.666667; 36.250000 128.916667; 36.000000 128.916667; 36.000000 128.666667
1298	GG17/60/91/99	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from samples in the Hwasan caldera.	미상	EDS, SHRIMP	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from samples in the Hwasan caldera.	군위군 동부 고로화산암복합체의 SHRIMP 저어콘 U-Pb연령과 칼데라 형성 과정(지질학회지 Geol_v59n3p303)	36.250000 128.666667; 36.250000 128.916667; 36.000000 128.916667; 36.000000 128.666667
1299	GG17/60/91/99	Summary of SHRIMP U-Pb isotope data of the analyzed zircons from igneous rocks in the Hwasan caldera.	미상	EDS, SHRIMP	Summary of SHRIMP U-Pb isotope data of the analyzed zircons from igneous rocks in the Hwasan caldera.	군위군 동부 고로화산암복합체의 SHRIMP 저어콘 U-Pb연령과 칼데라 형성 과정(지질학회지 Geol_v59n3p303)	36.250000 128.666667; 36.250000 128.916667; 36.000000 128.916667; 36.000000 128.666667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1300	PBg02, BHS04	(a) Tectonic province map of the Korean Peninsula and eastern China (after Kim et al., 2019), and (b) simplified geological map of the study area with sample locations (after Kee et al., 2019). Abbreviations: NM, Nangrim Massif; IB, Imjingang Belt; GM, Gyeonggi Massif; OB, Okcheon Belt; YM, Yeongnam Massif; TB, Taebaeksan Basin; GB, Gyeongsang Basin.	미상	LA-MC-ICP-MS, SEM	(a) Tectonic province map of the Korean Peninsula and eastern China (after Kim et al., 2019), and (b) simplified geological map of the study area with sample locations (after Kee et al., 2019). Abbreviations: NM, Nangrim Massif; IB, Imjingang Belt; GM, Gyeonggi Massif; OB, Okcheon Belt; YM, Yeongnam Massif; TB, Taebaeksan Basin; GB, Gyeongsang Basin.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306
1301	PBg02, BHS04	Representative backscattered electron (BSE) images of zircons from the Palbong (PBg02) and Baekхва (BHS04) granites. Circles indicate the locations of fs-LA-MC-ICP-MS analyses, and numbers represent the 206 Pb/238U ages of the zircons.	미상	LA-MC-ICP-MS, SEM	Representative backscattered electron (BSE) images of zircons from the Palbong (PBg02) and Baekхва (BHS04) granites. Circles indicate the locations of fs-LA-MC-ICP-MS analyses, and numbers represent the 206 Pb/238U ages of the zircons.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306
1302	PBg02, BHS04	Tera-Wasserburg diagrams of fs-LA-MC-ICP-MS U-Pb isotopic analysis for high-U zircons from Palbong (a) and Baekхва (b) granites. Error ellipses are at 2σ uncertainties.	미상	LA-MC-ICP-MS, SEM	Tera-Wasserburg diagrams of fs-LA-MC-ICP-MS U-Pb isotopic analysis for high-U zircons from Palbong (a) and Baekхва (b) granites. Error ellipses are at 2σ uncertainties.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306
1303	PBg02, BHS04	Plots of 206Pb/238U ages (Ma) vs. U concentrations determined by SHRIMP (a and c; Kim et al., 2019) and fs-LA-MC-ICP-MS (b and d; this study). Black lines in (a) and (c) are linear regression lines. Simple linear regression has been applied on 0 and 2,000 ppm of U to correct the shifted apparent SHRIMP 206Pb/238U ages. Error bars represent 1σ uncertainties.	미상	LA-MC-ICP-MS, SEM	Plots of 206Pb/238U ages (Ma) vs. U concentrations determined by SHRIMP (a and c; Kim et al., 2019) and fs-LA-MC-ICP-MS (b and d; this study). Black lines in (a) and (c) are linear regression lines. Simple linear regression has been applied on 0 and 2,000 ppm of U to correct the shifted apparent SHRIMP 206Pb/238U ages. Error bars represent 1σ uncertainties.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306
1304	PBg02, BHS04	Tera-Wasserburg diagrams of SHRIMP U-Pb isotopic analysis for high-U zircons from Palbong (a) and Baekхва (b) granites. Error ellipses are at 1σ uncertainties. Ellipse color represents the U concentrations of zircons.	미상	LA-MC-ICP-MS, SEM	Tera-Wasserburg diagrams of SHRIMP U-Pb isotopic analysis for high-U zircons from Palbong (a) and Baekхва (b) granites. Error ellipses are at 1σ uncertainties. Ellipse color represents the U concentrations of zircons.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306
1305	PBg02, BHS04	Tera-Wasserburg diagrams of fs-LA-MC-ICP-MS U-Pb isotopic analysis for high-U zircons from Palbong (a) and Baekхва (b) granites. Error ellipses are at 2σ uncertainties. Ellipse color represents the U concentrations of zircons.	미상	LA-MC-ICP-MS, SEM	Tera-Wasserburg diagrams of fs-LA-MC-ICP-MS U-Pb isotopic analysis for high-U zircons from Palbong (a) and Baekхва (b) granites. Error ellipses are at 2σ uncertainties. Ellipse color represents the U concentrations of zircons.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306
1306	PBg02, BHS04	fs-LA-MC-ICP-MS zircon U-Pb isotopic data for Palbong (PBg02) and Baekхва (BHS04) granites in the southwestern part of the Gyeonggi Massif.	미상	LA-MC-ICP-MS, SEM	fs-LA-MC-ICP-MS zircon U-Pb isotopic data for Palbong (PBg02) and Baekхва (BHS04) granites in the southwestern part of the Gyeonggi Massif.	메타믹트화된 고-우라늄 저어콘의 U-Pb 연대측정: SHRIMP와 fs-LA-MC-ICP-MS 연대분석법 비교(지질학회지 Geol_v59n2p235)	36.813453 126.369575 36.767258 126.299306

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1307	1~20	SEI (Secondary-Electron Image) of brianyoungite. a. Growth of tiny spherulite-rosette with 10-100 um in diameter from platy brianyoungite aggregate. b. Simple brianyoungite spherulite composed of tiny flaky-bladed crystals. c. Double brianyoungite spherulite. Flaky-bladed crystals are larger in the outer spherulite than those in the inner spherulite. d. Double brianyoungite spherulite with massive core.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	SEI (Secondary-Electron Image) of brianyoungite. a. Growth of tiny spherulite-rosette with 10-100 um in diameter from platy brianyoungite aggregate. b. Simple brianyoungite spherulite composed of tiny flaky-bladed crystals. c. Double brianyoungite spherulite. Flaky-bladed crystals are larger in the outer spherulite than those in the inner spherulite. d. Double brianyoungite spherulite with massive	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지 Geol_v58n2p167)	35.487239 128.905683
1308	1~20	SEI of brianyoungite. a. Platy to flaky brianyoungite about 5 um in width associated with bladed gypsum crystal. b. Large platy brianyoungite about 30 um in width surrounded by very tiny brianyoungite spherulites. Gp, Gypsum.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	SEI of brianyoungite. a. Platy to flaky brianyoungite about 5 um in width associated with bladed gypsum crystal. b. Large platy brianyoungite about 30 um in width surrounded by very tiny brianyoungite spherulites. Gp, Gypsum.	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지 Geol_v58n2p167)	35.487239 128.905683
1309	1~20	X-ray diffraction pattern for brianyoungite from the Gukjeon mine.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	X-ray diffraction pattern for brianyoungite from the Gukjeon mine.	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지)	35.487239 128.905683
1310	1~20	DTA (Differential Thermal Analysis), TG (Thermogravimetric analysis) and DTG (Derivative Thermogravimetry) curves for brianyoungite from the Gukjeon mine.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	DTA (Differential Thermal Analysis), TG (Thermogravimetric analysis) and DTG (Derivative Thermogravimetry) curves for brianyoungite from the Gukjeon mine.	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지 Geol_v58n2p167)	35.487239 128.905683
1311	1~20	Raman spectrum for brianyoungite from the Gukjeon mine.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	Raman spectrum for brianyoungite from the Gukjeon mine.	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지)	35.487239 128.905683
1312	1~20	X-ray diffraction data for brianyoungite from the Gukjeon mine.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	X-ray diffraction data for brianyoungite from the Gukjeon mine.	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지)	35.487239 128.905683
1313	1~20	Brianyoungite cell parameters calculated by unitcell program (Holland and Redfern, 1997).	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	Brianyoungite cell parameters calculated by unitcell program (Holland and Redfern, 1997).	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지 Geol_v58n2p167)	35.487239 128.905683
1314	1~20	Electron Microprobe Analysis for brianyoungite from the Gukjeon mine.	unitecell	XRD, DTA, DTG, EPMA, 미량자동원소분석	Electron Microprobe Analysis for brianyoungite from the Gukjeon mine.	우리나라 최초의 브라이언영가이트 산출에 대한 보고(지질학회지)	35.487239 128.905683
1315	KJ72/146, HS1, AU22	(a) Geological map of the Yeongnam Massif (1:1,000,000 scale) (from Kee et al., 2020); (b) Geological map of the Gwangju-Jangseong area (modified from Choi et al., 1986; Hong and Yun, 1986; Lee, B et al., 2021); (c) Geological map of the Hwasun-Boseong area (modified from Lee and Kim, 1966). Yellow stars represent sample locations.	미상	SHRIMP, LA-MC-ICP-MS	(a) Geological map of the Yeongnam Massif (1:1,000,000 scale) (from Kee et al., 2020); (b) Geological map of the Gwangju-Jangseong area (modified from Choi et al., 1986; Hong and Yun, 1986; Lee, B et al., 2021); (c) Geological map of the Hwasun-Boseong area (modified from Lee and Kim, 1966). Yellow stars represent sample locations.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700
1316	KJ72/146, HS1, AU22	(a) Photomicrograph of diatexite migmatite(KJ146) in the Jangseong area; (b) Photomicrograph of diatexite migmatite(HS1) in the Hwasun area. Abbreviations: Kfs, K-feldspar; Pl, plagioclase; Bt, biotite; Qz, quartz; Ms, muscovite.	미상	SHRIMP, LA-MC-ICP-MS	(a) Photomicrograph of diatexite migmatite(KJ146) in the Jangseong area; (b) Photomicrograph of diatexite migmatite(HS1) in the Hwasun area. Abbreviations: Kfs, K-feldspar; Pl, plagioclase; Bt, biotite; Qz, quartz; Ms, muscovite.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1317	KJ72/146, HS1, AU22	(a, b) Cathodoluminescence images of zircon grains from diatexite migmatite in the Jangseong area; (c) back-scattered electron and (d) cathodoluminescence images of zircon grains from diatexite migmatite in the Hwasun area.	미상	SHRIMP, LA-MC-ICP-MS	(a, b) Cathodoluminescence images of zircon grains from diatexite migmatite in the Jangseong area; (c) back-scattered electron and (d) cathodoluminescence images of zircon grains from diatexite migmatite in the Hwasun area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700
1318	KJ72/146, HS1, AU22	(a, b) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Gwangju-Jangseong area; (c, d) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Hwasun-Boseong area.	미상	SHRIMP, LA-MC-ICP-MS	(a, b) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Gwangju-Jangseong area; (c, d) Tera-Wasserburg concordia diagrams showing results of zircon U-Pb analysis from diatexite migmatite in the Hwasun-Boseong area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700
1319	KJ72/146, HS1, AU22	Zircon U-Pb age distribution patterns of diatexite migmatite (a, b) in the Gwangju-Jangseong area and (c, d) in the Hwasun-Boseong area.	미상	SHRIMP, LA-MC-ICP-MS	Zircon U-Pb age distribution patterns of diatexite migmatite (a, b) in the Gwangju-Jangseong area and (c, d) in the Hwasun-Boseong area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700
1320	KJ72/146, HS1, AU22	The coordinates of the global positioning system for zircon age dating samples.	미상	SHRIMP, LA-MC-ICP-MS	The coordinates of the global positioning system for zircon age dating samples.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700
1321	KJ72/146, HS1, AU22	The zircon age data of diatexite migmatite in Jangseong and Hawsun area.	미상	SHRIMP, LA-MC-ICP-MS	The zircon age data of diatexite migmatite in Jangseong and Hawsun area.	영남육괴 서부 고원생대 혼성암의 저어콘 U-Pb 연령: 퇴적기원 모암의 퇴적시기 고찰(지질학회지 Geol_v58n1p051)	35.350000 126.636700; 35.350000 127.261469; 34.705522 127.261469; 34.705522 126.636700
1322	UL26/587/23/17/24/567	Geological map of Nari caldera region, showing the sampling sites, the bounding ring faults and topographic rims.	ArArCALC ver 2.7.0 (beta)	불활성기체질량분석기	Geological map of Nari caldera region, showing the sampling sites, the bounding ring faults and topographic rims.	울릉도 나리 칼데라 내에서의 40Ar/39Ar 연대측정과 배관체계 추론(지질학회지 Geol_v57n5p679)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1323	UL26/587/23/17/24/567	Schematic map of the Nari caldera region summarizing the main structural and morphological features of the calderas	ArArCALC ver 2.7.0 (beta)	불활성기체질량분석기	Schematic map of the Nari caldera region summarizing the main structural and morphological features of the calderas	울릉도 나리 칼데라 내에서의 40Ar/39Ar 연대측정과 배관체계 추론(지질학회지 Geol_v57n5p679)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1324	UL26/587/23/17/24/567	40Ar/39Ar spectrum diagrams released from groundmass of the volcanic rocks in the Nari caldera. A Plateau consists of 50% or more of the 39Ar released, and a Mini-Plateau is considered anything less than 50% of the 39Ar released (Schaen et al., 2020). Standard initial 40Ar/36Ar ratio = 298.56±0.31 (SD) for samples, but excess initial 40Ar/36Ar ratio = 311.18±5.17 (SD) for UL-17.	ArArCALC ver 2.7.0 (beta)	불활성기체질량분석기	40Ar/39Ar spectrum diagrams released from groundmass of the volcanic rocks in the Nari caldera. A Plateau consists of 50% or more of the 39Ar released, and a Mini-Plateau is considered anything less than 50% of the 39Ar released (Schaen et al., 2020). Standard initial 40Ar/36Ar ratio = 298.56±0.31 (SD) for samples, but excess initial 40Ar/36Ar ratio = 311.18±5.17 (SD) for UL-17.	울릉도 나리 칼데라 내에서의 40Ar/39Ar 연대측정과 배관체계 추론(지질학회지 Geol_v57n5p679)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1325	UL26/587/23/17/24/567	40Ar/39Ar dating data of the volcanic rocks in Nari caldera.	ArArCALC ver 2.7.0 (beta)	불활성기체질량분석기	40Ar/39Ar dating data of the volcanic rocks in Nari caldera.	울릉도 나리 칼데라 내에서의 40Ar/39Ar 연대측정과 배관체계 추론(지질학회지 Geol_v57n5p679)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1326	20GG-1~5, 20SW-6/6-1/7/7-1	Geological maps in the vicinity of outcrops where hyperspectral images were taken; (a) Gyeonggi mine area (1:50,000 scale map modified from Hong and Choi, 1978), (b) Gasari A mine area (1:50,000 scale map modified from Geological Investigation Corps of the Taebaeksan Region, 1962) and (c) rectangle area depicted in (b) (1:5,000 scale map modified from Shon et al., 2001). Location of each mine (red dashed line in (a) and (b)) and outcrop for hyperspectral image (asterisk in each map) is indicated.	미상	XRD, 초분광분석	Geological maps in the vicinity of outcrops where hyperspectral images were taken; (a) Gyeonggi mine area (1:50,000 scale map modified from Hong and Choi, 1978), (b) Gasari A mine area (1:50,000 scale map modified from Geological Investigation Corps of the Taebaeksan Region, 1962) and (c) rectangle area depicted in (b) (1:5,000 scale map modified from Shon et al., 2001). Location of each mine (red dashed line in (a) and (b)) and outcrop for hyperspectral image (asterisk in each map) is indicated.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1327	20GG-1~5, 20SW-6/6-1/7/7-1	Concept of the continuum removal used to extract depth from the deepest absorption feature in the spectrum (e.g., kaolinite). The continuum is defined as a series of straight line segments (blue line). The continuum is removed by dividing the reflectance at the band center (Rb) by the corresponding continuum reflectance at the band center (Rc). Feature depth was calculated as 1 minus the continuum removed reflectance (Rb/Rc) at the deepest point of the absorption (from Clark et al., 2003).	미상	XRD, 초분광분석	Concept of the continuum removal used to extract depth from the deepest absorption feature in the spectrum (e.g., kaolinite). The continuum is defined as a series of straight line segments (blue line). The continuum is removed by dividing the reflectance at the band center (Rb) by the corresponding continuum reflectance at the band center (Rc). Feature depth was calculated as 1 minus the continuum removed reflectance (Rb/Rc) at the deepest point of the absorption (from	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1328	20GG-1~5, 20SW-6/6-1/7/7-1	Concept of the spectral feature fitting (from Harris, 2006).	미상	XRD, 초분광분석	Concept of the spectral feature fitting (from Harris, 2006).	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1329	20GG-1~5, 20SW-6/6-1/7/7-1	XRD results of the analyzed samples. (a) magnesite samples from Pailou mine, (b) dolomite samples from Gyeonggi mine and Gasari A mine, and (c) calcite samples from Gyeonggi mine and Gasari A mine.	미상	XRD, 초분광분석	XRD results of the analyzed samples. (a) magnesite samples from Pailou mine, (b) dolomite samples from Gyeonggi mine and Gasari A mine, and (c) calcite samples from Gyeonggi mine and Gasari	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1330	20GG-1~5, 20SW-6/6-1/7/7-1	Reflectance spectra of carbonate rock samples collected from Pailou, Gyeonggi mine, and Gasari A mines.	미상	XRD, 초분광분석	Reflectance spectra of carbonate rock samples collected from Pailou, Gyeonggi mine, and Gasari A mines.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1331	20GG-1~5, 20SW-6/6-1/7/7-1	Endmember spectra used for the multi range spectral feature fitting (MRSFF) mapping of the (a) Gyeonggi mine and (b) Gasari A mine.	미상	XRD, 초분광분석	Endmember spectra used for the multi range spectral feature fitting (MRSFF) mapping of the (a) Gyeonggi mine and (b) Gasari A mine.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1332	20GG-1~5, 20SW-6/6-1/7/7-1	Images of mineral absorption feature depth for Gyeonggi mine outcrop. Depth image at (a) 2336 nm, (b) 2320 nm, and (c) 2300 nm. Pink arrows indicate fractures and joints. Red circle indicate an area where the absorption depth value is larger at 2320 nm than the absorption depth value at 2336 nm.	미상	XRD, 초분광분석	Images of mineral absorption feature depth for Gyeonggi mine outcrop. Depth image at (a) 2336 nm, (b) 2320 nm, and (c) 2300 nm. Pink arrows indicate fractures and joints. Red circle indicate an area where the absorption depth value is larger at 2320 nm than the absorption depth value at 2336 nm.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1333	20GG-1~5, 20SW-6/6-1/7/7-1	Comparison of absorption depth at 2320 nm of continuum removed-dolomite and calcite spectra. These spectra are the endmembers extracted from the Gyeonggi mine (Fig. 7a).	미상	XRD, 초분광분석	Comparison of absorption depth at 2320 nm of continuum removed-dolomite and calcite spectra. These spectra are the endmembers extracted from the Gyeonggi mine (Fig. 7a).	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1334	20GG-1~5, 20SW-6/6-1/7/7-1	Images of mineral absorption feature depth for Gasari A mine outcrop. Depth image at (a) 2336 nm, (b) 2320 nm, (c) 2300 nm, and (d) 2220 nm. Red arrows indicate the location of magnesite samples placed on the outcrop.	미상	XRD, 초분광분석	Images of mineral absorption feature depth for Gasari A mine outcrop. Depth image at (a) 2336 nm, (b) 2320 nm, (c) 2300 nm, and (d) 2220 nm. Red arrows indicate the location of magnesite samples placed on the outcrop.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1335	20GG-1~5, 20SW-6/6-1/7/7-1	MRSFF mineral map of the Gyeonggi mine outcrop using image endmembers (Fig. 7a).	미상	XRD, 초분광분석	MRSFF mineral map of the Gyeonggi mine outcrop using image endmembers (Fig. 7a).	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1336	20GG-1~5, 20SW-6/6-1/7/7-1	MRSFF mineral map of the Gasari A mine outcrop using image endmembers (Fig. 7b).	미상	XRD, 초분광분석	MRSFF mineral map of the Gasari A mine outcrop using image endmembers (Fig. 7b).	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1337	20GG-1~5, 20SW-6/6-1/7/7-1	Subset of the Gasari A mine outcrop. (a) MRSFF mineral map. (b) Field photograph. Red circles indicate the location of magnesite samples placed on the outcrop. Red arrows show the location of calcite (20SW-6-1) and dolomite (20SW-7-1) samples.	미상	XRD, 초분광분석	Subset of the Gasari A mine outcrop. (a) MRSFF mineral map. (b) Field photograph. Red circles indicate the location of magnesite samples placed on the outcrop. Red arrows show the location of calcite (20SW-6-1) and dolomite (20SW-7-1) samples.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1338	20GG-1~5, 20SW-6/6-1/7/7-1	Endmembers and wavelength range for multi range spectral feature fitting applied to the Hypex Mjolnir S-620 image of (a) Gyeonggi mine and (b) Gasari A mine outcrops.	미상	XRD, 초분광분석	Endmembers and wavelength range for multi range spectral feature fitting applied to the Hypex Mjolnir S-620 image of (a) Gyeonggi mine and (b) Gasari A mine outcrops.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1339	20GG-1~5, 20SW-6/6-1/7/7-1	Whole rock major element compositions of analyzed samples.	미상	XRD, 초분광분석	Whole rock major element compositions of analyzed samples.	지상기반 초분광 영상을 이용한 탄산염 광산 노두 광물 분포도 작성(지질학회지 Geol_v56n6p753)	36.122386 127.395011
1340	N-5	Geological map of Ulleung Island after Hwang et al. (2012), showing the sampling sites (S) in the southern wall of Nari caldera.	미상	이미지분석	Geological map of Ulleung Island after Hwang et al. (2012), showing the sampling sites (S) in the southern wall of Nari caldera.	울릉도 말잔등응회암에서 멤버 N-5의 부 석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1341	N-5	Outcrop photograph showing a vertical section of the Member N-5 in the southern caldera wall.	미상	이미지분석	Outcrop photograph showing a vertical section of the Member N-5 in the southern caldera wall.	울릉도 말잔등응회암에서 멤버 N-5의 부 석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731

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1342	N-5	Photomicrographs that show textural features in modal pumice clasts from lapillistones (I1, I2 and I3) of the Member N-5, under plane light. (a) A coarse vesicle, with irregular ameoba shape, surrounded by fine and intermediate vesicles, x25; (b) Intermediate vesicles with irregular ameoba shape, x25; (c) Range of vesicle sizes is evenly distributed in a domain, x25; (d) Irregular distribution of fine vesicles between intermediate vesicles in a pumice clast, x25; (e) The central part of the x25 enlarged to the x50; (f) The central part of the x50 enlarged to the x100.	미상	이미지분석	Photomicrographs that show textural features in modal pumice clasts from lapillistones (I1, I2 and I3) of the Member N-5, under plane light. (a) A coarse vesicle, with irregular ameoba shape, surrounded by fine and intermediate vesicles, x25; (b) Intermediate vesicles with irregular ameoba shape, x25; (c) Range of vesicle sizes is evenly distributed in a domain, x25; (d) Irregular distribution of fine vesicles between intermediate vesicles in a pumice clast, x25; (e) The central part of the x25 enlarged to the x50; (f) The central part of the x50 enlarged to the	울릉도 말잔등응회암에서 멤버 N-5의 부석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1343	N-5	Histograms showing range in density for the pumice lapillistones (I1, I2 and I3) from the Member N-5.	미상	이미지분석	Histograms showing range in density for the pumice lapillistones (I1, I2 and I3) from the Member N-5.	울릉도 말잔등응회암에서 멤버 N-5의 부석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1344	N-5	Histograms showing vesicularity distribution for the pumice lapillistones (I1, I2 and I3) from the Member N-5.	미상	이미지분석	Histograms showing vesicularity distribution for the pumice lapillistones (I1, I2 and I3) from the Member N-5.	울릉도 말잔등응회암에서 멤버 N-5의 부석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1345	N-5	Histograms showing that the mean vesicularities of the Member N-5 are significantly distinguished from those of the other members.	미상	이미지분석	Histograms showing that the mean vesicularities of the Member N-5 are significantly distinguished from those of the other members.	울릉도 말잔등응회암에서 멤버 N-5의 부석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1346	N-5	A longitudinal section showing the levels of hypothetical magmatic and phreatomagmatic fragmentation surfaces in the conduit of the Member N-5.	미상	이미지분석	A longitudinal section showing the levels of hypothetical magmatic and phreatomagmatic fragmentation surfaces in the conduit of the Member	울릉도 말잔등응회암에서 멤버 N-5의 부석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1347	N-5	Parameters for lapillistone units from Member N-5, and average parameters for units of lapillistone and pumice deposits from the other Maljandeung Tuff.	미상	이미지분석	Parameters for lapillistone units from Member N-5, and average parameters for units of lapillistone and pumice deposits from the other Maljandeung	울릉도 말잔등응회암에서 멤버 N-5의 부석편 기공률과 분화유형(지질학회지 Geol_v55n4p431)	37.527647 130.860731; 37.527647 130.878164; 37.514975 130.878164; 37.514975 130.860731
1348	WS29, JW001/002/023/064/ 079	Geological map of the study area showing the study locations of fault cores and subsidiary faults.	미상	ESR연대측정	Geological map of the study area showing the study locations of fault cores and subsidiary faults.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1349	WS29, JW001/002/023/064/ 079	Study locations of fault cores. (a) DEM image showing the lineament of the Wangsukcheon Fault. The study locations of the fault cores are located along the lineament of the Wangsukcheon Fault (the red arrows). The red dots represent the study locations of fault core. The green dots represent previous study locations of fault cores. (b) An aerial photograph showing the study locations of fault cores. The yellow line represents trace of the Wangsukcheon Fault.	미상	ESR연대측정	Study locations of fault cores. (a) DEM image showing the lineament of the Wangsukcheon Fault. The study locations of the fault cores are located along the lineament of the Wangsukcheon Fault (the red arrows). The red dots represent the study locations of fault core. The green dots represent previous study locations of fault cores. (b) An aerial photograph showing the study locations of fault cores. The yellow line represents trace of	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1350	WS29, JW001/002/023/064/ 079	Outcrop photographs of the main fault plane at the study location A. (a) The fault plane between biotite gneiss and foliated dark-gray fault gouge zone. (b) The fault plane between fault breccia and foliated greenish brown fault gouge zone. The red arrows represent fault surfaces.	미상	ESR연대측정	Outcrop photographs of the main fault plane at the study location A. (a) The fault plane between biotite gneiss and foliated dark-gray fault gouge zone. (b) The fault plane between fault breccia and foliated greenish brown fault gouge zone. The red arrows represent fault	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1351	WS29, JW001/002/023/064/ 079	Photographs of scaly fabrics and phacoids developed in fault cores at the study location A. (a) Photograph of scaly fabrics developed in the Wangsukcheon Fault cores. (b, c) Photographs of part of fault gouge showing the foliations that define scaly fabric and phacoids of the host rock. (d) Slickenlines on the foliation surfaces indicating sliding along the foliation.	미상	ESR연대측정	Photographs of scaly fabrics and phacoids developed in fault cores at the study location A. (a) Photograph of scaly fabrics developed in the Wangsukcheon Fault cores. (b, c) Photographs of part of fault gouge showing the foliations that define scaly fabric and phacoids of the host rock. (d) Slickenlines on the foliation surfaces indicating sliding	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1352	WS29, JW001/002/023/064/ 079	Photographs of rock slab of the fault breccia at the study location A. (a) Shear plane; the red arrows represent shear plane. (b) Shear band; lenticular rock fragments suspended in the fault gouge band.	미상	ESR연대측정	Photographs of rock slab of the fault breccia at the study location A. (a) Shear plane; the red arrows represent shear plane. (b) Shear band; lenticular rock fragments suspended in the fault gouge band.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1353	WS29, JW001/002/023/064/ 079	Outcrop photographs of the shear planes showing dextral strike-slip movement at the study location A. (a) The directional nomenclature and geometrical relationships of the structural elements(modified from Rutter et al., 1986; Passchier and Trouw, 1996). (b) A close-up photograph of R-shear plane at fault gouge zone 1. (c) A close-up photograph of R-shear plane at fault breccia zone 1. (d) A close-up photograph of P-shear plane at fault gouge zone 2. (e) A close-up photograph of R-shear plane at fault gouge zone 2.	미상	ESR연대측정	Outcrop photographs of the shear planes showing dextral strike-slip movement at the study location A. (a) The directional nomenclature and geometrical relationships of the structural elements(modified from Rutter et al., 1986; Passchier and Trouw, 1996). (b) A close-up photograph of R-shear plane at fault gouge zone 1. (c) A close-up photograph of R-shear plane at fault breccia zone 1. (d) A close-up photograph of P-shear plane at fault gouge zone 2. (e) A close-up photograph of R-shear plane at fault	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539

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1354	WS29, JW001/002/023/064/ 079	(a) Rock slab image of the fault breccia in the slip-parallel section at the study location A. Pervasive shear planes and shear bands are developed in the fault breccia. Shear planes and shear bands are indicative of dextral slip movement. (b) Geometrical illustration of typical foliated fault breccia. (c) Stereoplots of shear planes and shear bands within the rock slab. A red great circle in the stereoplots shows the average orientation of the Wangsukcheon fault plane.	미상	ESR연대측정	(a) Rock slab image of the fault breccia in the slip-parallel section at the study location A. Pervasive shear planes and shear bands are developed in the fault breccia. Shear planes and shear bands are indicative of dextral slip movement. (b) Geometrical illustration of typical foliated fault breccia. (c) Stereoplots of shear planes and shear bands within the rock slab. A red great circle in the stereoplots shows the average orientation of the Wangsukcheon fault	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1355	WS29, JW001/002/023/064/ 079	(a) SEM image of fault gouge showing the S-C fabric. (b) Magnification of the red boxed area in (a). Clay minerals are arranged along the S-foliations. C-surfaces cut the S-foliations.	미상	ESR연대측정	(a) SEM image of fault gouge showing the S-C fabric. (b) Magnification of the red boxed area in (a). Clay minerals are arranged along the S-foliations. C-surfaces cut the S-foliations.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1356	WS29, JW001/002/023/064/ 079	(a) Photographic mosaic of the cross-section of the fault core at the study location B. (b) A simplified sketch of the cross-section of the fault core at the study location B. (c) Close-up photographic mosaic and a simplified sketch of NW boundary area of fault core at the study location B.	미상	ESR연대측정	(a) Photographic mosaic of the cross-section of the fault core at the study location B. (b) A simplified sketch of the cross-section of the fault core at the study location B. (c) Close-up photographic mosaic and a simplified sketch of NW boundary area of fault core at the study location B.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1357	WS29, JW001/002/023/064/ 079	Outcrop photographs of the shear plane showing dextral strike-slip movement at the study location B. (a) The directional nomenclature and geometrical relationships of the structural elements (modified from Rutter et al., 1986; Passchier and Trouw, 1996). (b, c) A close-up photographs of S-foliations developed in the fault gouge. (d) A close-up photograph of R-shear plane. (e) A close-up photograph of S-foliation and R-shear planes.	미상	ESR연대측정	Outcrop photographs of the shear plane showing dextral strike-slip movement at the study location B. (a) The directional nomenclature and geometrical relationships of the structural elements (modified from Rutter et al., 1986; Passchier and Trouw, 1996). (b, c) A close-up photographs of S-foliations developed in the fault gouge. (d) A close-up photograph of R-shear plane. (e) A close-up photograph of S-foliation and R-shear planes.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539

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1358	WS29, JW001/002/023/064/ 079	(a) A simplified sketch of the cross-section of the fault core showing the internal structures at the study location B. (b) The directional nomenclature and geometrical relationships of the structural elements (modified from Rutter et al., 1986; Passchier and Trouw, 1996). (c) Stereoplots of foliations and shear planes within the fault gouge zone 1. (d) Stereoplots of foliations and shear planes within the fault breccia zone 1. (e) Stereoplots of foliations and shear planes within the fault gouge zone 2. A red great circle in the stereoplots shows the average orientation of the Wangsukcheon fault plane.	미상	ESR연대측정	(a) A simplified sketch of the cross-section of the fault core showing the internal structures at the study location B. (b) The directional nomenclature and geometrical relationships of the structural elements (modified from Rutter et al., 1986; Passchier and Trouw, 1996). (c) Stereoplots of foliations and shear planes within the fault gouge zone 1. (d) Stereoplots of foliations and shear planes within the fault breccia zone 1. (e) Stereoplots of foliations and shear planes within the fault gouge zone 2. A red great circle in the stereoplots shows the average orientation of the Wangsukcheon fault	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1359	WS29, JW001/002/023/064/ 079	Fault core at the study location C. (a) Outcrop photograph and a simplified sketch of the cross-section of fault core at the study location C. (b) A close-up photograph of foliations. (c) A close-up photograph of Y-shear plane. Dragged foliations indicate dextral sense of fault movements. (d) Stereoplots of foliations and shear planes within the fault core at the study location C. The directional nomenclature and geometrical relationships of the structural elements (modified from Rutter et al., 1986; Passchier and Trouw, 1996). A red great circle in the stereoplots shows the average orientation of the Wangsukcheon fault plane.	미상	ESR연대측정	Fault core at the study location C. (a) Outcrop photograph and a simplified sketch of the cross-section of fault core at the study location C. (b) A close-up photograph of foliations. (c) A close-up photograph of Y-shear plane. Dragged foliations indicate dextral sense of fault movements. (d) Stereoplots of foliations and shear planes within the fault core at the study location C. The directional nomenclature and geometrical relationships of the structural elements (modified from Rutter et al., 1986; Passchier and Trouw, 1996). A red great circle in the stereoplots shows the average orientation of the Wangsukcheon fault plane.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1360	WS29, JW001/002/023/064/ 079	(a) Outcrop photograph of the subsidiary fault with sampling location and ESR age at the study location a. (b) Outcrop photograph of the subsidiary fault with sampling location and ESR age at the study location b.	미상	ESR연대측정	(a) Outcrop photograph of the subsidiary fault with sampling location and ESR age at the study location a. (b) Outcrop photograph of the subsidiary fault with sampling location and ESR age at the study location b.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1361	WS29, JW001/002/023/064/ 079	(a) Sampling locations and ESR ages at the cross-section of the fault core at the study location A. (b) Sampling locations and ESR ages at the NW boundary area of the fault core at the study location B. (c) Sampling locations and ESR age at the cross-section of the fault core at the study location B.	미상	ESR연대측정	(a) Sampling locations and ESR ages at the cross-section of the fault core at the study location A. (b) Sampling locations and ESR ages at the NW boundary area of the fault core at the study location B. (c) Sampling locations and ESR age at the cross-section of the fault core at the study location B.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539

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1362	WS29, JW001/002/023/064/ 079	Sampling locations and ESR ages at the cross-section of the fault core at the study location C.	미상	ESR연대측정	Sampling locations and ESR ages at the cross-section of the fault core at the study location C.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1363	WS29, JW001/002/023/064/ 079	Growth curves of ESR signals for three fault gouge samples (JW079-3, JW079-44, JW001-4) collected in the study location A and C. (a, b) Growth curves of E' signals and AI signals for JW079-3. (c, d) Growth curves of E' signals and AI signals for JW079-44. (e, f) Growth curves of E' signals and AI signals for JW001-4.	미상	ESR연대측정	Growth curves of ESR signals for three fault gouge samples (JW079-3, JW079-44, JW001-4) collected in the study location A and C. (a, b) Growth curves of E' signals and AI signals for JW079-3. (c, d) Growth curves of E' signals and AI signals for JW079-44. (e, f) Growth curves of E' signals and AI signals for JW001-4.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1364	WS29, JW001/002/023/064/ 079	Growth curves of ESR signals and ESR ages vs. Grain sizes for two fault gouge samples (JW064, JW023) collected in the study location a and b. (a, b) Growth curves of E' signals and AI signals for JW064. (c) ESR ages vs. Grain sizes for JW064. (d, e) Growth curves of E' signals and AI signals for JW023. (f) ESR ages vs. Grain sizes for JW023.	미상	ESR연대측정	Growth curves of ESR signals and ESR ages vs. Grain sizes for two fault gouge samples (JW064, JW023) collected in the study location a and b. (a, b) Growth curves of E' signals and AI signals for JW064. (c) ESR ages vs. Grain sizes for JW064. (d, e) Growth curves of E' signals and AI signals for JW023. (f) ESR ages vs. Grain sizes for JW023.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1365	WS29, JW001/002/023/064/ 079	The generation and development of the Wangsukcheon fault core. (a) A close-up photograph of biotite gneiss in the study area. (b) The biotite gneiss is fractured by distributed crush brecciation within red circle. (c, d) The shear strain is localized, and shear-surfaces and shear-bands are developed. Progressive attrition brecciation in the shear-bands and rock interfaces increases the amount of gouge materials and expands the thickness of the shear bands(within red circle). Lenticular rock fragments are suspended in the fault gouge. (e, f) The fault gouge zone is developed by linking and coalescing the shear bands. With the increase of shear strain, S-foliation defined by the preferred orientation of clay within the gouge zone has formed.	미상	ESR연대측정	The generation and development of the Wangsukcheon fault core. (a) A close-up photograph of biotite gneiss in the study area. (b) The biotite gneiss is fractured by distributed crush brecciation within red circle. (c, d) The shear strain is localized, and shear-surfaces and shear-bands are developed. Progressive attrition brecciation in the shear-bands and rock interfaces increases the amount of gouge materials and expands the thickness of the shear bands(within red circle). Lenticular rock fragments are suspended in the fault gouge. (e, f) The fault gouge zone is developed by linking and coalescing the shear bands. With the increase of shear strain, S-foliation defined by the preferred	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1366	WS29, JW001/002/023/064/ 079	Outcrop photographs and a photographic mosaic of fault cores developed along the Wangsukcheon fault. Sampling locations and ESR ages at the cross-section of the fault core at the study locations. (a) Location A. (b) Location C. (c) Location D.	미상	ESR연대측정	Outcrop photographs and a photographic mosaic of fault cores developed along the Wangsukcheon fault. Sampling locations and ESR ages at the cross-section of the fault core at the study locations. (a) Location A. (b)	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1367	WS29, JW001/002/023/064/ 079	Temporal activity pattern at the Wangsukcheon fault during the Quaternary Period (data from the National Emergency Management Agency, 2012; Bae and Lee, 2016).	미상	ESR연대측정	Temporal activity pattern at the Wangsukcheon fault during the Quaternary Period (data from the National Emergency Management Agency, 2012; Bae and Lee, 2016).	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1368	WS29, JW001/002/023/064/ 079	Amount of U (ppm), Th (ppm) and 40K (%) for each sample of Wangsukcheon fault gouges.	미상	ESR연대측정	Amount of U (ppm), Th (ppm) and 40K (%) for each sample of Wangsukcheon fault gouges.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1369	WS29, JW001/002/023/064/ 079	Analytical data for ESR dating of fault gouges in the study area.	미상	ESR연대측정	Analytical data for ESR dating of fault gouges in the study area.	경기도 포천시 내촌면~화현면 일대에 발달한 왕숙천단층의 지질구조 특성 및 ESR 연대(지질학회지 Geol_v55n4p377)	37.970756 127.186539; 37.970756 127.424444; 37.680125 127.424444; 37.680125 127.186539
1370	HSR03/04	(a) Tectonic province map of the Korean Peninsula and eastern China, and (b) simplified geological map of the study area with sample location (after Kim et al., 2019). Abbreviations: NM, Nangrim Massif; IB, Imjingang Belt; GM, Gyeonggi Massif; OB, Okcheon Belt; YM, Yeongnam Massif; TB, Taebaeksan Basin; GB, Gyeongsang Basin	미상	SHRIMP	(a) Tectonic province map of the Korean Peninsula and eastern China, and (b) simplified geological map of the study area with sample location (after Kim et al., 2019). Abbreviations: NM, Nangrim Massif; IB, Imjingang Belt; GM, Gyeonggi Massif; OB, Okcheon Belt; YM, Yeongnam Massif; TB, Taebaeksan Basin; GB, Gyeongsang Basin	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200
1371	HSR03/04	Photomicrographs of (a) HSR03 and (b) HSR04 migmatitic gneisses. The photos were taken under cross-polarized light. Abbreviations: Bt = Biotite; Kfs = K-feldspar; Ms = Muscovite; Pl = Plagioclase; Qtz = Quartz.	미상	SHRIMP	Photomicrographs of (a) HSR03 and (b) HSR04 migmatitic gneisses. The photos were taken under cross-polarized light. Abbreviations: Bt = Biotite; Kfs = K-feldspar; Ms = Muscovite; Pl = Plagioclase; Qtz = Quartz.	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200
1372	HSR03/04	Representative Cathodoluminescence images of zircons from Jigokri migmatitic gneiss (HSR03 and HSR04). Circles indicate the locations for SHRIMP U-Pb analyses and include the spot numbers. Numbers represent the apparent 204Pb-corrected 207Pb/206Pb ages, except Triassic zircons in (a) where the numbers represent 207Pb-corrected 206Pb/238U ages.	미상	SHRIMP	Representative Cathodoluminescence images of zircons from Jigokri migmatitic gneiss (HSR03 and HSR04). Circles indicate the locations for SHRIMP U-Pb analyses and include the spot numbers. Numbers represent the apparent 204Pb-corrected 207Pb/206Pb ages, except Triassic zircons in (a) where the numbers represent 207Pb-corrected 206Pb/238U ages.	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200
1373	HSR03/04	Tera-Wasserburg concordia diagrams for SHRIMP zircon U-Pb analyses from Jigokri migmatitic gneisses (HSR03 and HSR04). The data-point error ellipses are plotted with 1σ errors. Symbol colors as in Fig. 4.	미상	SHRIMP	Tera-Wasserburg concordia diagrams for SHRIMP zircon U-Pb analyses from Jigokri migmatitic gneisses (HSR03 and HSR04). The data-point error ellipses are plotted with 1σ errors. Symbol colors as in Fig. 4.	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200
1374	HSR03/04	U vs. Th contents of Jigokri migmatitic gneisses (HSR03 and HSR04). Symbol colors as in Fig. 4.	미상	SHRIMP	U vs. Th contents of Jigokri migmatitic gneisses (HSR03 and HSR04). Symbol colors as in Fig. 4.	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200
1375	HSR03/04	Modal analysis for Jigokri migmatitic gneisses.	미상	SHRIMP	Modal analysis for Jigokri migmatitic gneisses.	경기육괴 서남부 가로림만의 지곡리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1376	HSR03/04	SHRIMP zircon U-Pb isotopic data for Jigokri migmatitic gneisses (HSR03 and HSR04) in the southwestern part of the Gyeonggi Massif.	미상	SHRIMP	SHRIMP zircon U-Pb isotopic data for Jigokri migmatitic gneisses (HSR03 and HSR04) in the southwestern part of the Gyeonggi Massif.	경기육괴 서남부 가로림만의 지국리층 혼성편마암 저어콘에 대한 SHRIMP U-Pb 연대(지질학회지 Geol_v55n2p191)	36.857400 126.368200
1377	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Map of sample locations in Mt. Halla, Jeju Island (contour interval in 100 m).	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Map of sample locations in Mt. Halla, Jeju Island (contour interval in 100 m).	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1378	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	(Na2O+K2O)(wt%) vs. SiO2(wt%) plot of the volcanic rocks from Mt. Halla, Jeju Island. The fields show rock nomenclature schemes of Le Maitre et al. (2002) with thick dashed line from Macdonald and Katura (1964), dividing alkalic rocks from sub-alkalic rocks.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	(Na2O+K2O)(wt%) vs. SiO2(wt%) plot of the volcanic rocks from Mt. Halla, Jeju Island. The fields show rock nomenclature schemes of Le Maitre et al. (2002) with thick dashed line from Macdonald and Katura (1964), dividing alkalic rocks from sub-alkalic rocks.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1379	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	40Ar-39Ar absolute age results of the whole rock (groundmass) samples from Mt. Halla, Jeju Island.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	40Ar-39Ar absolute age results of the whole rock (groundmass) samples from Mt. Halla, Jeju Island.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1380	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	40Ar-39Ar absolute age results of phenocrysts of volcanic rocks from Mt. Halla, Jeju Island. Abbreviation: AF-alkali feldspar; PL-plagioclase. Sample (anorthoclase phenocrysts) of HA0403 has results of both total fusion age and ideogram.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	40Ar-39Ar absolute age results of phenocrysts of volcanic rocks from Mt. Halla, Jeju Island. Abbreviation: AF-alkali feldspar; PL-plagioclase. Sample (anorthoclase phenocrysts) of HA0403 has results of both total fusion age and ideogram.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1381	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Field photograph showing (a) layered Aa lava flows at valley cut near Tamra Shelter, and (b) basaltic dike intruding into tephra layer near Yongjin Bridge. The samples H0406 and K-04 were collected from each unit.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Field photograph showing (a) layered Aa lava flows at valley cut near Tamra Shelter, and (b) basaltic dike intruding into tephra layer near Yongjin Bridge. The samples H0406 and K-04 were collected from each unit.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1382	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Field photograph showing lava flows covering the eastern part of Baengrokdam (with enlarged photo). The samples H0404 and BK-B were collected from these lava flows. Tephra layer (brown color in enlarged photo) is overlaid with lava flow.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Field photograph showing lava flows covering the eastern part of Baengrokdam (with enlarged photo). The samples H0404 and BK-B were collected from these lava flows. Tephra layer (brown color in enlarged photo) is overlaid with lava flow.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1383	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Field photograph showing (a) unnamed hill-1725, lava cone (red arrow) and (b) basaltic lava flows with trachyte xenolith. The samples HA0411 and HA0412 were collected from these lava flows.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Field photograph showing (a) unnamed hill-1725, lava cone (red arrow) and (b) basaltic lava flows with trachyte xenolith. The samples HA0411 and HA0412 were collected from these lava flows.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1384	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Field photograph showing (a) trachyte cliff at Yeongsil and (b) basaltic lava xenolith. The sample HA0415 was collected from this xenolith.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Field photograph showing (a) trachyte cliff at Yeongsil and (b) basaltic lava xenolith. The sample HA0415 was collected from this xenolith.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1385	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	40Ar-39Ar absolute ages (with 2 SD) vs. volcanic rock types from Mt. Halla, Jeju Island. The ages of whole rock (groundmass) and phenocryst are represented by solid and dashed lines, respectively. The solid box indicates range of each volcanic episode, I and II. Abbreviation: AB-alkali basalt, TB-trachybasalt, BTA-basaltic trachyandesite, TA-trachyandesite and T-trachyte in composition; AF-alkali feldspar; PL-plagioclase.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	40Ar-39Ar absolute ages (with 2 SD) vs. volcanic rock types from Mt. Halla, Jeju Island. The ages of whole rock (groundmass) and phenocryst are represented by solid and dashed lines, respectively. The solid box indicates range of each volcanic episode, I and II. Abbreviation: AB-alkali basalt, TB-trachybasalt, BTA-basaltic trachyandesite, TA-trachyandesite and T-trachyte in composition; AF-alkali feldspar; PL-plagioclase.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1386	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Field photograph showing (a) sill-type extrusion of trachyte (dashed lines) along the northern cliff of Baengnokdam at the northern end of Yongjingak valley, (b) enlarged photo and (c) agglomerate block from scoria layer rolled onto the valley.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Field photograph showing (a) sill-type extrusion of trachyte (dashed lines) along the northern cliff of Baengnokdam at the northern end of Yongjingak valley, (b) enlarged photo and (c) agglomerate block from scoria layer rolled onto the valley.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1387	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Sample locations of volcanic rocks at the studied area, Mt. Halla, Jeju Island.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Sample locations of volcanic rocks at the studied area, Mt. Halla, Jeju Island.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1388	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	Major element abundances of volcanic rocks at the studied area, Mt. Halla, Jeju Island.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	Major element abundances of volcanic rocks at the studied area, Mt. Halla, Jeju Island.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1389	BE, BK-B, HA0401~0415, K-01/04, YC, YVA	40Ar-39Ar age of volcanic rocks at the studied area, Mt. Halla, Jeju Island.	ArArCALC ver 2.7.0 (beta)	아르곤-아르곤 연대측정, XRF	40Ar-39Ar age of volcanic rocks at the studied area, Mt. Halla, Jeju Island.	제주도 한라산 고지대의 다중 화산분화 기록: 용암류의 40Ar/39Ar 연대(지질학회지 Geol_v55n1p071)	33.416667 126.500000; 33.416667 126.550000; 33.333333 126.550000; 33.333333 126.500000
1390	GS-416/296	(a) Simplified geological map (modified from Hwang et al., 1996; Kim et al., 1998; Choi et al., 2002) and key beds (modified from Jeong et al., 2005; Jeon and Sohn, 2008; Hwang and Woo, 2009) of the Gyeongsang Basin. Stratigraphic correlation is reconstructed from Chang et al. (2003), Chough and Sohn (2010), and Kang and Paik (2013). (b) Detailed geological map of the study area (modified from Chang et al., 1983a; Paik et al., 2006).	미상	ICP-MS	(a) Simplified geological map (modified from Hwang et al., 1996; Kim et al., 1998; Choi et al., 2002) and key beds (modified from Jeong et al., 2005; Jeon and Sohn, 2008; Hwang and Woo, 2009) of the Gyeongsang Basin. Stratigraphic correlation is reconstructed from Chang et al. (2003), Chough and Sohn (2010), and Kang and Paik (2013). (b) Detailed geological map of the study area (modified from Chang et al., 1983a; Paik et al., 2006).	경상분지 남부 고생층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1391	GS-416/296	Outcrop photographs showing the major lithologies of the Goseong Formation. (a) Massive purple mudstone and overlying tuffaceous sandstone. (b) Purple mudstone and greenish sandstone, which are dominant lithologies within the Goseong Formation. (c) Well-stratified dark gray mudstone, mainly observed in the northern and eastern parts of the formation. (d) Crudely stratified conglomerate and pebbly sandstone. (e-f) Dacitic tuff layers observed in the lower (e) and upper (f) parts of the Goseong Formation, respectively. Each tuff layer consists of lower ash tuff unit and upper lapilli tuff unit. (g) Yucheon Group andesitic ash tuff overlying the Goseong Formation.	미상	ICP-MS	Outcrop photographs showing the major lithologies of the Goseong Formation. (a) Massive purple mudstone and overlying tuffaceous sandstone. (b) Purple mudstone and greenish sandstone, which are dominant lithologies within the Goseong Formation. (c) Well-stratified dark gray mudstone, mainly observed in the northern and eastern parts of the formation. (d) Crudely stratified conglomerate and pebbly sandstone. (e-f) Dacitic tuff layers observed in the lower (e) and upper (f) parts of the Goseong Formation, respectively. Each tuff layer consists of lower ash tuff unit and upper lapilli tuff unit. (g) Yucheon Group andesitic ash tuff overlying the	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1392	GS-416/296	LA-ICP-MS U-Pb zircon dating results. (a) Tera-Wasserburg and (b) 206Pb/238U weighted mean age plots of the dacitic ash tuff in the upper Goseong Formation. (c) Tera-Wasserburg and (d) 206Pb/238U weighted mean age plots of the andesitic ash tuff overlying the Goseong Formation.	미상	ICP-MS	LA-ICP-MS U-Pb zircon dating results. (a) Tera-Wasserburg and (b) 206Pb/238U weighted mean age plots of the dacitic ash tuff in the upper Goseong Formation. (c) Tera-Wasserburg and (d) 206Pb/238U weighted mean age plots of the	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1393	GS-416/296	Cathodoluminescence images showing the representative zircons selected from the dacitic ash tuff in the upper Goseong Formation (a) and the andesitic ash tuff overlying the Goseong Formation (b). Inset circles (20 µm in diameter) indicate the analyzed spot.	미상	ICP-MS	Cathodoluminescence images showing the representative zircons selected from the dacitic ash tuff in the upper Goseong Formation (a) and the andesitic ash tuff overlying the Goseong Formation (b). Inset circles (20 µm in diameter) indicate the analyzed spot.	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1394	GS-416/296	Structural map of the study area showing the faults and traces of bedding. Inset shows dip directions of stratal attitudes.	미상	ICP-MS	Structural map of the study area showing the faults and traces of bedding. Inset shows dip directions of stratal attitudes.	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1395	GS-416/296	(a) Contour and (b) rose diagrams showing the attitudes of faults in the study area.	미상	ICP-MS	(a) Contour and (b) rose diagrams showing the attitudes of faults in the study area.	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1396	GS-416/296	Slip data obtained from the post-depositional faults and fold axes estimated from best-fitting π -circle of various attitudes of fold limbs (lower-hemisphere, equal-area projection). Convergent and divergent arrow heads represent contraction (σ Hmax) and horizontal stretch (σ Hmin) direction, respectively. When determined, the principal stress axes σ 1 (circles), σ 2 (triangles), σ 3 (squares) are also projected. Based on the relative chronologies at the outcrops, reconstructed paleostress regimes are grouped into (1) NW-SE compression or NE-SW tension (D2), (2) NE-SW compression or NW-SE tension (D4), and (3) E-W compression (D5), in ascending order. $R' = R$ (σ 1 is vertical), or 2-R (σ 2 is vertical), or 2+R (σ 3 is vertical) [Delvaux et al., 1997; $R=(\sigma$ 2- σ 3)/(σ 1- σ 3)].	미상	ICP-MS	Slip data obtained from the post-depositional faults and fold axes estimated from best-fitting π -circle of various attitudes of fold limbs (lower-hemisphere, equal-area projection). Convergent and divergent arrow heads represent contraction (σ Hmax) and horizontal stretch (σ Hmin) direction, respectively. When determined, the principal stress axes σ 1 (circles), σ 2 (triangles), σ 3 (squares) are also projected. Based on the relative chronologies at the outcrops, reconstructed paleostress regimes are grouped into (1) NW-SE compression or NE-SW tension (D2), (2) NE-SW compression or NW-SE tension (D4), and (3) E-W compression (D5), in ascending order. $R' = R$ (σ 1 is vertical), or 2-R (σ 2 is vertical), or 2+R (σ 3 is vertical)	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1397	GS-416/296	Outcrop photographs and diagrams showing the major features of the syndepositional structures (D1). (a) Contour and rose diagrams showing the attitudes of all growth faults within the Goseong Formation. Note that WNW-striking growth faults are dominant. (b, c) WNW-striking growth faults. (d) N-S-striking growth fault. (e) Reconstructed paleo-stress regime indicating NE-SW tension (D1) (f) Contour and rose diagrams showing the attitudes of all clastic dyke within the Goseong Formation. (g, h) NW-striking clastic dykes containing various lithic fragments, which are poorly sorted and angular.	미상	ICP-MS	Outcrop photographs and diagrams showing the major features of the syndepositional structures (D1). (a) Contour and rose diagrams showing the attitudes of all growth faults within the Goseong Formation. Note that WNW-striking growth faults are dominant. (b, c) WNW-striking growth faults. (d) N-S-striking growth fault. (e) Reconstructed paleo-stress regime indicating NE-SW tension (D1) (f) Contour and rose diagrams showing the attitudes of all clastic dyke within the Goseong Formation. (g, h) NW-striking clastic dykes containing various lithic fragments, which are poorly sorted and	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1398	GS-416/296	Outcrop photographs and sketch of the post-depositional faults formed under NW-SE compressional or NE-SW tensional stress field (D2). (a) NW-striking clastic dyke offset by N-S-striking dextral fault and WNW-striking sinistral fault. (b) N-S-striking sinistral strike-slip faults and its (c) sketch. The fault shows a network of multiple anastomosing strands. (d) NW-striking en-echelon veins indicating a sinistral sense of the N-S-striking fault. (e) Slickenline indicating sinistral strike-slip sense observed on the N-S-striking fault surface. (f) The N-S-striking fault transected by a WNW-striking intermediate dyke.	미상	ICP-MS	Outcrop photographs and sketch of the post-depositional faults formed under NW-SE compressional or NE-SW tensional stress field (D2). (a) NW-striking clastic dyke offset by N-S-striking dextral fault and WNW-striking sinistral fault. (b) N-S-striking sinistral strike-slip faults and its (c) sketch. The fault shows a network of multiple anastomosing strands. (d) NW-striking en-echelon veins indicating a sinistral sense of the N-S-striking fault. (e) Slickenline indicating sinistral strike-slip sense observed on the N-S-striking fault surface. (f) The N-S-striking fault transected by a WNW-striking	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1399	GS-416/296	Outcrop photographs and diagrams showing the major features of the intermediate dyke swarm (D3). (a) Contour and rose diagrams showing the attitudes of all intermediate dyke in the study area. (b, c) WNW- and N-S-striking intermediate dyke intruding the Goseong Formation. (d, e) Close-up views showing porphyritic texture (d) and fine-grained texture (e).	미상	ICP-MS	Outcrop photographs and diagrams showing the major features of the intermediate dyke swarm (D3). (a) Contour and rose diagrams showing the attitudes of all intermediate dyke in the study area. (b, c) WNW- and N-S-striking intermediate dyke intruding the Goseong Formation. (d, e) Close-up views showing porphyritic texture (d) and fine-grained texture (e).	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1400	GS-416/296	Outcrop photographs showing the major features of the post-depositional faults formed under NE-SW compressional or NW-SE tensional stress field (D4). (a) N-S- and (b) WNW-striking intermediate dyke, which underwent dextral and sinistral slips on their contacts, respectively. (c) Slickenline indicating the sinistral strike-slip sense. (d) Slickenline indicating the dextral strike-slip sense. (e) WNW-striking sinistral strike-slip fault cutting the intermediate dyke. (f) Slickenline indicating the sinistral, reverse oblique-slip sense on the WNW-striking fault surface. (g) Slickenline indicating the dextral, normal oblique-slip sense on the N-S striking shear fracture.	미상	ICP-MS	Outcrop photographs showing the major features of the post-depositional faults formed under NE-SW compressional or NW-SE tensional stress field (D4). (a) N-S- and (b) WNW-striking intermediate dyke, which underwent dextral and sinistral slips on their contacts, respectively. (c) Slickenline indicating the sinistral strike-slip sense. (d) Slickenline indicating the dextral strike-slip sense. (e) WNW-striking sinistral strike-slip fault cutting the intermediate dyke. (f) Slickenline indicating the sinistral, reverse oblique-slip sense on the WNW-striking fault surface. (g) Slickenline indicating the dextral, normal oblique-slip sense on	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1401	GS-416/296	Geochronological records in SE Korea and summary of the paleostress history in study area.	미상	ICP-MS	Geochronological records in SE Korea and summary of the paleostress history in study area.	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956

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1402	GS-416/296	LA-ICP-MS data and calculated ages of the dacitic ash tuff in the upper Goseong Formation.	미상	ICP-MS	LA-ICP-MS data and calculated ages of the dacitic ash tuff in the upper Goseong Formation.	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1403	GS-416/296	LA-ICP-MS data and calculated ages of the andesitic ash tuff overlying the Goseong Formation.	미상	ICP-MS	LA-ICP-MS data and calculated ages of the andesitic ash tuff overlying the Goseong Formation.	경상분지 남부 고성층의 분포, 퇴적시기와 구조진화사(지질학회지 Geol_v54n4p359)	35.018114 128.258956; 35.018114 128.433622; 34.937961 128.433622; 34.937961 128.258956
1404	HT031/161/111	Geological map around the Yokjido, showing sample locations of the present study together.	SQUID ver. 2.5, Isoplot/Ex ver. 3.6	SHRIMP	Geological map around the Yokjido, showing sample locations of the present study together.	통영 육지도 주변 화산암류의 SHRIMP 저어콘 U-Pb 연대측정과 층서적 의미(지질학회지 Geol_v54n3p269)	34.750000 128.166667; 34.750000 128.333333; 34.500000 128.333333; 34.500000 128.166667
1405	HT031/161/111	Representative Cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Jabupo Tuff (HT031), Nodaedo Tuff (HT169) and Galdo Tuff (HT111).	SQUID ver. 2.5, Isoplot/Ex ver. 3.6	SHRIMP	Representative Cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Jabupo Tuff (HT031), Nodaedo Tuff (HT169) and Galdo Tuff (HT111).	통영 육지도 주변 화산암류의 SHRIMP 저어콘 U-Pb 연대측정과 층서적 의미(지질학회지 Geol_v54n3p269)	34.750000 128.166667; 34.750000 128.333333; 34.500000 128.333333; 34.500000 128.166667
1406	HT031/161/111	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	SQUID ver. 2.5, Isoplot/Ex ver. 3.6	SHRIMP	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	통영 육지도 주변 화산암류의 SHRIMP 저어콘 U-Pb 연대측정과 층서적 의미(지질학회지 Geol_v54n3p269)	34.750000 128.166667; 34.750000 128.333333; 34.500000 128.333333; 34.500000 128.166667
1407	HT031/161/111	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from samples (a) HT031, (b) HT169 and (c) HT111.	SQUID ver. 2.5, Isoplot/Ex ver. 3.6	SHRIMP	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from samples (a) HT031, (b) HT169 and (c) HT111.	통영 육지도 주변 화산암류의 SHRIMP 저어콘 U-Pb 연대측정과 층서적 의미(지질학회지 Geol_v54n3p269)	34.750000 128.166667; 34.750000 128.333333; 34.500000 128.333333; 34.500000 128.166667
1408	HT031/161/111	Summary of SHRIMP U-Pb isotopic data of the analytical zircons from the volcanic rocks around the Yokjido	SQUID ver. 2.5, Isoplot/Ex ver. 3.6	SHRIMP	Summary of SHRIMP U-Pb isotopic data of the analytical zircons from the volcanic rocks around the Yokjido	통영 육지도 주변 화산암류의 SHRIMP 저어콘 U-Pb 연대측정과 층서적 의미(지질학회지 Geol_v54n3p269)	34.750000 128.166667; 34.750000 128.333333; 34.500000 128.333333; 34.500000 128.166667
1409	HT031/161/111	Stratigraphic correlation from zircon ages in three regions of the Yucheon subbasin.	SQUID ver. 2.5, Isoplot/Ex ver. 3.6	SHRIMP	Stratigraphic correlation from zircon ages in three regions of the Yucheon subbasin.	통영 육지도 주변 화산암류의 SHRIMP 저어콘 U-Pb 연대측정과 층서적 의미(지질학회지 Geol_v54n3p269)	34.750000 128.166667; 34.750000 128.333333; 34.500000 128.333333; 34.500000 128.166667
1410	16BR03/08, 17BR06/09	(a) Google photo-map showing the geodynamic setting along the eastern margin of the Eurasian Plate. (b) Generalized geological map of Baegryeong Island showing the stratigraphic relationships of rocks and the sample locations of this study (Lim et al., 1999).	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	(a) Google photo-map showing the geodynamic setting along the eastern margin of the Eurasian Plate. (b) Generalized geological map of Baegryeong Island showing the stratigraphic relationships of rocks and the sample locations of this study (Lim et al., 1999).	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1411	16BR03/08, 17BR06/09	Photomicrographs of the spinel peridotite xenoliths from Baegryeong Island. All photos were taken under cross-polarized light. (a) A protogranular texture in the xenolith showing kink band in olivine and a olivine grain enclosed in orthopyroxene(16BR09). (b) A left-over olivine inclusion in a large orthopyxene (16BR09). (c) A transition from protogranular (the right upper section) to equigranular (the left lower section) (16BR03). (d) A left-over olivine inclusion in orthopyroxene (16BR03). (e) A cumulate texture showing elongated minerals with a preferred orientation (16BR08). (f) A left-over olivine inclusion in orthopyroxene (16BR08). ol=olivine; opx=orthopyroxene; cpx=clinopyroxene; sp=spinel.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Photomicrographs of the spinel peridotite xenoliths from Baegryeong Island. All photos were taken under cross-polarized light. (a) A protogranular texture in the xenolith showing kink band in olivine and a olivine grain enclosed in orthopyroxene(16BR09). (b) A left-over olivine inclusion in a large orthopyxene (16BR09). (c) A transition from protogranular (the right upper section) to equigranular (the left lower section) (16BR03). (d) A left-over olivine inclusion in orthopyroxene (16BR03). (e) A cumulate texture showing elongated minerals with a preferred orientation (16BR08). (f) A left-over olivine inclusion in orthopyroxene (16BR08). ol=olivine; opx=orthopyroxene; cpx=clinopyroxene;	백령도 네오기 진촌 현무암에 포획된 점정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1412	16BR03/08, 17BR06/09	Olivine and orthopyroxene composition of the peridotite xenoliths from Baegryeong Island. (a, b) Relationships between Al ₂ O ₃ versus CaO, and Cr ₂ O ₃ for orthopyroxene. (c) Relationship between Mg# for olivine vs Al ₂ O ₃ for orthopyroxene.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Olivine and orthopyroxene composition of the peridotite xenoliths from Baegryeong Island. (a, b) Relationships between Al ₂ O ₃ versus CaO, and Cr ₂ O ₃ for orthopyroxene. (c) Relationship between Mg# for olivine vs Al ₂ O ₃ for	백령도 네오기 진촌 현무암에 포획된 점정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1413	16BR03/08, 17BR06/09	Clinopyroxene composition of the peridotite xenoliths from Baegryeong Island. (a, b) Al ₂ O ₃ vs TiO ₂ and Cr ₂ O ₃ . (c, d) Relationship between Mg# vs Al ₂ O ₃ and Na ₂ O. (e) Relationship between clinopyroxene Mg# vs orthopyroxene Mg#.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Clinopyroxene composition of the peridotite xenoliths from Baegryeong Island. (a, b) Al ₂ O ₃ vs TiO ₂ and Cr ₂ O ₃ . (c, d) Relationship between Mg# vs Al ₂ O ₃ and Na ₂ O. (e) Relationship between clinopyroxene Mg# vs orthopyroxene Mg#.	백령도 네오기 진촌 현무암에 포획된 점정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1414	16BR03/08, 17BR06/09	(a) Relationships between Cr#[=100Cr/(Cr+Al) atomic ratio] for spinel and Fo[=100Mg/(Mg+Fe) atomic ratio] for olivine. (b) Relationships between the Mg# and Cr# of spinel. Olivine-spinel mantle array and melting trend (annotated by partial melting (%)) are from Arai (1994). FFM, fertile MORB mantle; SSZ, supra-subduction zone.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	(a) Relationships between Cr#[=100Cr/(Cr+Al) atomic ratio] for spinel and Fo[=100Mg/(Mg+Fe) atomic ratio] for olivine. (b) Relationships between the Mg# and Cr# of spinel. Olivine-spinel mantle array and melting trend (annotated by partial melting (%)) are from Arai (1994). FFM, fertile MORB mantle; SSZ, supra-subduction zone.	백령도 네오기 진촌 현무암에 포획된 점정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1415	16BR03/08, 17BR06/09	Clinopyroxene composition of the peridotite xenoliths from Baegryeong Island. (a) C1 chondrite-normalized (McDonough and Sun, 1995) REE patterns. (b) Primitive mantle-normalized (McDonough and Sun, 1995) multi-element spider diagram.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Clinopyroxene composition of the peridotite xenoliths from Baegryeong Island. (a) C1 chondrite-normalized (McDonough and Sun, 1995) REE patterns. (b) Primitive mantle-normalized (McDonough and Sun, 1995) multi-element spider diagram.	백령도 네오기 진촌 현무암에 포획된 점정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1416	16BR03/08, 17BR06/09	Model calculations for clinopyroxene REE from the studied xenoliths (Ntaflou et al., 2008). (a) Chondrite-normalized REE abundance patterns (after McDonough and Sun, 1995) of clinopyroxenes and of predicted residual clinopyroxenes from batch melting model calculation(shaded area). Closed square and open square represent core and rim of the sample "16BR03", respectively. (b) Predicted batch melting model trend with primitive mantle normalized Y and Yb (after McDonough and Sun 1995) of clinopyroxenes from the Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Model calculations for clinopyroxene REE from the studied xenoliths (Ntaflou et al., 2008). (a) Chondrite-normalized REE abundance patterns (after McDonough and Sun, 1995) of clinopyroxenes and of predicted residual clinopyroxenes from batch melting model calculation(shaded area). Closed square and open square represent core and rim of the sample "16BR03", respectively. (b) Predicted batch melting model trend with primitive mantle normalized Y and Yb (after McDonough and Sun 1995) of clinopyroxenes from	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1417	16BR03/08, 17BR06/09	Modal composition, lithology, calculated pressure and equilibrium temperature conditions for the studied peridotite xenoliths from Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Modal composition, lithology, calculated pressure and equilibrium temperature conditions for the studied peridotite xenoliths from Baegryeong Island.	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1418	16BR03/08, 17BR06/09	Major element compositions of olivines (wt%) for peridotite xenoliths from Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Major element compositions of olivines (wt%) for peridotite xenoliths from Baegryeong Island.	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1419	16BR03/08, 17BR06/09	Major element compositions of orthopyroxenes (wt%) for peridotite xenoliths from Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Major element compositions of orthopyroxenes (wt%) for peridotite xenoliths from Baegryeong Island.	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1420	16BR03/08, 17BR06/09	Major element compositions of clinopyroxenes (wt%) for peridotite xenoliths from Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Major element compositions of clinopyroxenes (wt%) for peridotite xenoliths from Baegryeong Island.	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1421	16BR03/08, 17BR06/09	Major element compositions of spinels (wt%) for peridotite xenoliths from Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Major element compositions of spinels (wt%) for peridotite xenoliths from Baegryeong Island.	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1422	16BR03/08, 17BR06/09	Trace element concentrations (ppm) for clinopyroxene in mantle xenoliths from Baegryeong Island.	GLITTER! ver. 4.4.4	EPMA; LA-MC-ICP-MS	Trace element concentrations (ppm) for clinopyroxene in mantle xenoliths from Baegryeong Island.	백령도 네오기 진촌 현무암에 포획된 침정석 페리도타이트의 암석학적 특성(지질학회지 Geol_v54n1p075)	37.985753 124.604739; 37.985753 124.741708; 37.912419 124.741708; 37.912419 124.604739
1423	HC735/736/737/798 /799/800	(a) Index map of South Korea; (b) Regional geological map of the Gyeongsang basin, in which a white box area, Fig. 2, indicates location of the study area.	미상	SHRIMP	(a) Index map of South Korea; (b) Regional geological map of the Gyeongsang basin, in which a white box area, Fig. 2, indicates location of the study area.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정(지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1424	HC735/736/737/798 /799/800	Geological map around the Myeonbongsan caldera, together showing sample locations of the present study.	미상	SHRIMP	Geological map around the Myeonbongsan caldera, together showing sample locations of the present study.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정(지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1425	HC735/736/737/798/799/800	Representative Cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Eobongsan Granitoid (HC800), Myeonbongsan Tuff (HC735), Rhyolite porphyry (HC737), Fine-grained diorite (HC798) and Biotite granite (HC799).	미상	SHRIMP	Representative Cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Eobongsan Granitoid (HC800), Myeonbongsan Tuff (HC735), Rhyolite porphyry (HC737), Fine-grained diorite (HC798) and Biotite granite (HC799).	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정 (지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1426	HC735/736/737/798/799/800	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	미상	SHRIMP	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정 (지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1427	HC735/736/737/798/799/800	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from samples (a) HC800, (b) HC735, (c) HC737 and (d) HC736.	미상	SHRIMP	Concordia diagrams for SHRIMP U-Pb ages of zircons separated from samples (a) HC800, (b) HC735, (c) HC737 and (d) HC736.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정 (지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1428	HC735/736/737/798/799/800	Concordia diagram for SHRIMP U-Pb ages of zircons separated from samples (a) HC798 and (b) HC799 in the Bohyeonsan Granitoid.	미상	SHRIMP	Concordia diagram for SHRIMP U-Pb ages of zircons separated from samples (a) HC798 and (b) HC799 in the Bohyeonsan Granitoid.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정 (지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1429	HC735/736/737/798/799/800	Summary of SHRIMP U-Pb isotope data of the analyzed zircons from igneous rocks around the Myeonbongsan caldera.	미상	SHRIMP	Summary of SHRIMP U-Pb isotope data of the analyzed zircons from igneous rocks around the Myeonbongsan caldera.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정 (지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1430	HC735/736/737/798/799/800	Correlations between previous and present geological sequences, and SHRIMP U-Pb ages in the Cheongsong area.	미상	SHRIMP	Correlations between previous and present geological sequences, and SHRIMP U-Pb ages in the Cheongsong area.	청송 면봉산 칼데라 주변의 화성암류에 대한 SHRIMP U-Pb 연대측정과 화성과정 (지질학회지 Geol_v53n6p781)	36.250000 128.916667; 36.250000 129.083333; 36.311111 129.083333; 36.311111 128.916667
1431	YC699	Geological map around the Bojongsan Trachyte, with an index map showing location of the study area in Korea. A: Jeongok fault, B: Choseong thrust, C: Singo fault, D: Dongsong fault. Small letters a~f and YC 699 represent each site of photographs in the Fig. 2 and sample for the SHRIMP dating.	미상	SHRIMP	Geological map around the Bojongsan Trachyte, with an index map showing location of the study area in Korea. A: Jeongok fault, B: Choseong thrust, C: Singo fault, D: Dongsong fault. Small letters a~f and YC 699 represent each site of photographs in the Fig. 2 and sample for the SHRIMP dating.	임진강대에서 보장산조면암의 SHRIMP U-Pb 저어콘 연대측정과 층서적 의미(지질학회지 Geol_v53n2p423)	38.083333 127.083333; 38.083333 127.250000; 37.990000 127.250000; 37.990000 127.083333
1432	YC699	(a) Zircon grains separated from the Bojongsan Trachyte. The grains show light yellowish green colors; (b) Representative cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from the Bojongsan Trachyte.	미상	SHRIMP	(a) Zircon grains separated from the Bojongsan Trachyte. The grains show light yellowish green colors; (b) Representative cathodoluminescence images of the analysed zircon grains, showing the location of analytical spots and 206Pb/238U ages in Ma, separated from	임진강대에서 보장산조면암의 SHRIMP U-Pb 저어콘 연대측정과 층서적 의미(지질학회지 Geol_v53n2p423)	38.083333 127.083333; 38.083333 127.250000; 37.990000 127.250000; 37.990000 127.083333
1433	YC699	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	미상	SHRIMP	Correlation diagram showing the proportions of Th to U concentrations (ppm) of the zircons analyzed by SHRIMP.	임진강대에서 보장산조면암의 SHRIMP U-Pb 저어콘 연대측정과 층서적 의미(지질학회지 Geol_v53n2p423)	38.083333 127.083333; 38.083333 127.250000; 37.990000 127.250000; 37.990000 127.083333

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1434	YC699	Concordia diagram for SHRIMP U-Pb ages of zircons separated from sample YC 699 in the Bojongsan Trachyte.	미상	SHRIMP	Concordia diagram for SHRIMP U-Pb ages of zircons separated from sample YC 699 in the Bojongsan Trachyte.	임진강대에서 보장산조면암의 SHRIMP U-Pb 저어콘 연대측정과 층서적 의미(지질학회지 Geol_v53n2p423)	38.083333 127.083333; 38.083333 127.250000; 37.990000 127.250000; 37.990000 127.083333
1435	YC699	Summary of SHRIMP U-Pb isotopic data of the analyzed zircons from the Bojongsan Trachyte.	미상	SHRIMP	Summary of SHRIMP U-Pb isotopic data of the analyzed zircons from the Bojongsan Trachyte.	임진강대에서 보장산조면암의 SHRIMP U-Pb 저어콘 연대측정과 층서적 의미(지질학회지 Geol_v53n2p423)	38.083333 127.083333; 38.083333 127.250000; 37.990000 127.250000; 37.990000 127.083333
1436	KT11B, KT11M	(a) Distribution map of the Cretaceous basins in South Korea. (b) Simplified geological map of the Gyeongsang Basin with distribution of the Gusandong Tuff, outcrop localities, and sampling sites.	미상	대자율이방성측정, 열처리	(a) Distribution map of the Cretaceous basins in South Korea. (b) Simplified geological map of the Gyeongsang Basin with distribution of the Gusandong Tuff, outcrop localities, and	열처리를 통한 자기미세구조의 변화: 경상분지 구산동융회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1437	KT11B, KT11M	Principles of AMS method for determining rock fabrics (Borradaile, 1988; Tarling and Hrouda, 1993). (a) A rock fabric represented by (b) an AMS ellipsoid. Three orthogonal axes of the ellipsoid correspond to maximum (k1), intermediate (k2), and minimum (k3) principal axes. (c) 15 position scheme for measuring the AMS of a sample. (d-g) Normal AMS ellipsoids and results corresponding to no-preferred, flattened, stretched, flattened and stretched rock fabrics, respectively.	미상	대자율이방성측정, 열처리	Principles of AMS method for determining rock fabrics (Borradaile, 1988; Tarling and Hrouda, 1993). (a) A rock fabric represented by (b) an AMS ellipsoid. Three orthogonal axes of the ellipsoid correspond to maximum (k1), intermediate (k2), and minimum (k3) principal axes. (c) 15 position scheme for measuring the AMS of a sample. (d-g) Normal AMS ellipsoids and results corresponding to no-preferred, flattened, stretched, flattened and stretched rock fabrics, respectively.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동융회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1438	KT11B, KT11M	Theoretical model showing kn/km ratio against mixture ratio of normal and inverse (magnetic) fabrics. (a) A real rock fabric represented by (b) two different AMS ellipsoids due to normal (upper) and inverse (lower) magnetic fabrics. (c, d) Theoretical model assuming progressive mixing of coaxial normal and inverse fabrics, showing the variations of orientation and magnitude of AMS axes according to the mixture ratio (modified from Rochette et al., 1992; Ferré, 2002).	미상	대자율이방성측정, 열처리	Theoretical model showing kn/km ratio against mixture ratio of normal and inverse (magnetic) fabrics. (a) A real rock fabric represented by (b) two different AMS ellipsoids due to normal (upper) and inverse (lower) magnetic fabrics. (c, d) Theoretical model assuming progressive mixing of coaxial normal and inverse fabrics, showing the variations of orientation and magnitude of AMS axes according to the mixture ratio (modified from Rochette et al.,	열처리를 통한 자기미세구조의 변화: 경상분지 구산동융회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1439	KT11B, KT11M	Representative AMS results of each individual specimen in (a) KT11B and (b) KT11M sites during stepwise thermal treatment.	미상	대자율이방성측정, 열처리	Representative AMS results of each individual specimen in (a) KT11B and (b) KT11M sites during stepwise thermal treatment.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동융회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1440	KT11B, KT11M	Total AMS results of all specimens of (a) KT11B, (b) KT11M, (c) KT18B, and (d) KT18M sites at each thermal treatment step. Gray stereonet instruct the temperature ranges in which the directional changes of AMS principal axes rapidly occur.	미상	대자율이방성측정, 열처리	Total AMS results of all specimens of (a) KT11B, (b) KT11M, (c) KT18B, and (d) KT18M sites at each thermal treatment step. Gray stereonet instruct the temperature ranges in which the directional changes of AMS principal axes rapidly occur.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동융회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1441	KT11B, KT11M	Representative AMS results of each individual specimen in KT18B (a) and KT18M (b) sites during stepwise thermal treatment.	미상	대자율이방성측정, 열처리	Representative AMS results of each individual specimen in KT18B (a) and KT18M (b) sites during stepwise thermal treatment.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동응회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1442	KT11B, KT11M	Representative stereonet and diagrams showing the variations of direction and magnitude of AMS principal axes of (a) Type-0, (b) Type-I, (c) Type-II, (d) Type-IIIa, and (e) Type-IIIb during thermal treatment.	미상	대자율이방성측정, 열처리	Representative stereonet and diagrams showing the variations of direction and magnitude of AMS principal axes of (a) Type-0, (b) Type-I, (c) Type-II, (d) Type-IIIa, and (e) Type-IIIb during thermal treatment.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동응회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1443	KT11B, KT11M	Representative grain fabrics measured in thin-section and AMS fabrics before heating of (a) KT18B, (b) KT18M, (c) KT18B, and (d) KT18M. Left: Distribution of long axes of grains in bedding plane. Center: Distribution of long axes of grains in section view. Right: AMS fabrics before heating.	미상	대자율이방성측정, 열처리	Representative grain fabrics measured in thin-section and AMS fabrics before heating of (a) KT18B, (b) KT18M, (c) KT18B, and (d) KT18M. Left: Distribution of long axes of grains in bedding plane. Center: Distribution of long axes of grains in section view. Right: AMS fabrics before heating.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동응회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1444	KT11B, KT11M	Summary of AMS data during stepwise thermal treatment.	미상	대자율이방성측정, 열처리	Summary of AMS data during stepwise thermal treatment.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동응회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1445	KT11B, KT11M	Classification of change patterns of magnetic fabric by thermal treatment.	미상	대자율이방성측정, 열처리	Classification of change patterns of magnetic fabric by thermal treatment.	열처리를 통한 자기미세구조의 변화: 경상분지 구산동응회암에서의 사례연구(지질학회지 Geol_v51n2p171)	36.317756 127.721494; 36.317756 128.843456; 34.562803 128.843456; 34.562803 127.721494
1446	HK001-1~3, HK27-1~4	Temporal variations of ESR intensities of a fault zone. The intensities of ESR signals are zeroed by a series of fault activities. The main fault and subsidiary faults have their own movement histories. However, we can determine the time of the last reactivation of fault gouge for each fault, using ESR method. Steeper rise in ESR intensity after faulting results from creation of new precursor ESR centers by shearing (modified from Lee and Schwarcz, 1996).	미상	ESR	Temporal variations of ESR intensities of a fault zone. The intensities of ESR signals are zeroed by a series of fault activities. The main fault and subsidiary faults have their own movement histories. However, we can determine the time of the last reactivation of fault gouge for each fault, using ESR method. Steeper rise in ESR intensity after faulting results from creation of new precursor ESR centers by shearing (modified from Lee and Schwarcz, 1996).	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1447	HK001-1~3, HK27-1~4	Schematic diagram of faulting mode (modified from Lee and Schwarcz, 1996, 2011). (a) Type I faulting mode. (b) Type II faulting mode. (c) Type III faulting mode. (d) Type IV faulting mode.	미상	ESR	Schematic diagram of faulting mode (modified from Lee and Schwarcz, 1996, 2011). (a) Type I faulting mode. (b) Type II faulting mode. (c) Type III faulting mode. (d) Type IV faulting mode.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1448	HK001-1~3, HK27-1~4	Location and geological maps of the study area. (a) Geological map. (b), (c) Location map (modified from Choi and Choi, 2007).	미상	ESR	Location and geological maps of the study area. (a) Geological map. (b), (c) Location map (modified from Choi and Choi, 2007).	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506

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1449	HK001-1~3, HK27-1~4	Digital elevation model (DEM) of the study area. White arrows indicate the trace of the Keumwang Fault.	미상	ESR	Digital elevation model (DEM) of the study area. White arrows indicate the trace of the Keumwang Fault.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1450	HK001-1~3, HK27-1~4	Photographs of rock slabs and thin sections of the sedimentary rocks in the study area. (a), (c), (e) Sandstones. (b), (d), (f) Mudrocks.	미상	ESR	Photographs of rock slabs and thin sections of the sedimentary rocks in the study area. (a), (c), (e) Sandstones. (b), (d), (f) Mudrocks.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1451	HK001-1~3, HK27-1~4	(a) Faults and folds generated by left-lateral simple shear in a strike-slip fault (modified from Waldron, 2005; Davis et al., 2012). (b) Directional nomenclatures and geometrical relationships of the structural elements (modified from Rutter et al., 1986).	미상	ESR	(a) Faults and folds generated by left-lateral simple shear in a strike-slip fault (modified from Waldron, 2005; Davis et al., 2012). (b) Directional nomenclatures and geometrical relationships of the structural elements (modified from Rutter et al., 1986).	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1452	HK001-1~3, HK27-1~4	Outcrop photographs of the fault core of the Keumwang Fault at the A site (after Hong and Lee, 2012).	미상	ESR	Outcrop photographs of the fault core of the Keumwang Fault at the A site (after Hong and Lee, 2012).	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1453	HK001-1~3, HK27-1~4	Stereo plots of subsidiary faults in the B site. (a) Faults in the orientation of Y-shear. (b) Faults in the orientation of P-shear.	미상	ESR	Stereo plots of subsidiary faults in the B site. (a) Faults in the orientation of Y-shear. (b) Faults in the orientation of P-shear.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1454	HK001-1~3, HK27-1~4	Outcrop photographs of subsidiary faults developed in the damage zone of the Keumwang Fault at the B site.	미상	ESR	Outcrop photographs of subsidiary faults developed in the damage zone of the Keumwang Fault at the B site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1455	HK001-1~3, HK27-1~4	Outcrop photographs of the fault core of the Keumwang Fault at the C site.	미상	ESR	Outcrop photographs of the fault core of the Keumwang Fault at the C site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1456	HK001-1~3, HK27-1~4	Stereo plots of subsidiary faults in the damage zone of the Keumwang Fault in the C site. (a) Faults in the orientation of main fault. (b) Faults in the orientation of Y-shear. (c) Faults in the orientation of R-shear. (d) Faults in the orientation of R'-shear. (e) Faults in the orientation of P-shear. (f) Orientation of reverse(thrust) fault.	미상	ESR	Stereo plots of subsidiary faults in the damage zone of the Keumwang Fault in the C site. (a) Faults in the orientation of main fault. (b) Faults in the orientation of Y-shear. (c) Faults in the orientation of R-shear. (d) Faults in the orientation of R'-shear. (e) Faults in the orientation of P-shear. (f) Orientation of reverse(thrust) fault.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1457	HK001-1~3, HK27-1~4	Outcrop photographs of subsidiary faults in the damage zone of the Keumwang Fault at the C site.	미상	ESR	Outcrop photographs of subsidiary faults in the damage zone of the Keumwang Fault at the C site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1458	HK001-1~3, HK27-1~4	Typical examples of growth curves of ESR signals for samples collected in the B site.	미상	ESR	Typical examples of growth curves of ESR signals for samples collected in the B site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506

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1459	HK001-1~3, HK27-1~4	ESR ages vs. grain sizes for samples collected in the B site.	미상	ESR	ESR ages vs. grain sizes for samples collected in the B site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1460	HK001-1~3, HK27-1~4	Typical examples of growth curves of ESR signals for samples collected in the C site.	미상	ESR	Typical examples of growth curves of ESR signals for samples collected in the C site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1461	HK001-1~3, HK27-1~4	ESR ages vs. grain sizes for samples collected in the C site.	미상	ESR	ESR ages vs. grain sizes for samples collected in the C site.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1462	HK001-1~3, HK27-1~4	Schematic diagrams showing the consistent ESR age estimates along the Keumwang Fault.	미상	ESR	Schematic diagrams showing the consistent ESR age estimates along the Keumwang Fault.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1463	HK001-1~3, HK27-1~4	Temporal activity patten of the Keumwang Fault in the study area.	미상	ESR	Temporal activity patten of the Keumwang Fault in the study area.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1464	HK001-1~3, HK27-1~4	Spatial activity patten of the Keumwang Fault in the study area. (a) The Keumwang Fault was active in the Maedong-myeon, Eumseong-gun about 71 million years ago. (b), (c) The Keumwang Fault was active from Maedong-myeon, Eumseong-gun to Deoksan-myeon, Jincheon-gun about 48~56 million years and 29~39 million years ago. (d) The Keumwang Fault was active in the Deoksan-myeon, Jincheon-gun about 14 million years ago.	미상	ESR	Spatial activity patten of the Keumwang Fault in the study area. (a) The Keumwang Fault was active in the Maedong-myeon, Eumseong-gun about 71 million years ago. (b), (c) The Keumwang Fault was active from Maedong-myeon, Eumseong-gun to Deoksan-myeon, Jincheon-gun about 48~56 million years and 29~39 million years ago. (d) The Keumwang Fault was active in the Deoksan-myeon, Jincheon-	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1465	HK001-1~3, HK27-1~4	Amount of U, Th, K for each sample of fault gouges.	미상	ESR	Amount of U, Th, K for each sample of fault gouges.	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1466	HK001-1~3, HK27-1~4	Analytical data for ESR dating of fault gouge. Weighted mean is calculated from the ESR ages within the plateau (shown as rectangle in column of ESR age) and the values have been rounded up.	미상	ESR	Analytical data for ESR dating of fault gouge. Weighted mean is calculated from the ESR ages within the plateau (shown as rectangle in column of ESR age) and the values have been rounded	충청북도 진천-음성군 일대에 발달한 금왕단층의 시간-공간적 활동형태(지질학회지 Geol_v50n6p735)	36.915464 127.502506; 36.915464 127.566833; 36.847261 127.566833; 36.847261 127.502506
1467	BA1~7, UJ07/13/20/02/11, OLD-1~7	Geological map and sampling locations for stable isotope analysis in the study area of Wangpiri in Uljin (modified after Moon et al., 1996).	미상	XRF, ICP-MS, ICP-AES, IRMS	Geological map and sampling locations for stable isotope analysis in the study area of Wangpiri in Uljin (modified after Moon et al., 1996).	울진 왕피리 보암 리틀광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944

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1468	BA1~7, UJ07/13/20/02/11, OLD-1~7	Photographs of Li ore specimen. a: breccia-type Li ore, b: Vein-type Li ore. Breccia-type Li ore is characterized by darker purple color than vein-type Li ore due to abundant occurrence of lepidoleite in breccia-type Li ores.	미상	XRF, ICP-MS, ICP-AES, IRMS	Photographs of Li ore specimen. a: breccia-type Li ore, b: Vein-type Li ore. Breccia-type Li ore is characterized by darker purple color than vein-type Li ore due to abundant occurrence of lepidoleite in breccia-type Li ores.	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1469	BA1~7, UJ07/13/20/02/11, OLD-1~7	Photomicrographs of Li ores. a: breccia-type Li ore that contains abundant fine-grained lithium mica, lepidolite (XPL), b: breccia-type Li ore (PPL), c: breccia-type Li ore that shows prismatic lithium tourmaline, elbaite (XPL), d: breccia-type Li ore (PPL), e: vein-type Li ore that shows coarse-grained lepidolite and quartz (XPL), f: vein-type Li ore (PPL). Abbreviations are as follows: Lpd;lepidolite, Elb; elbaite, Qz; quartz	미상	XRF, ICP-MS, ICP-AES, IRMS	Photomicrographs of Li ores. a: breccia-type Li ore that contains abundant fine-grained lithium mica, lepidolite (XPL), b: breccia-type Li ore (PPL), c: breccia-type Li ore that shows prismatic lithium tourmaline, elbaite (XPL), d: breccia-type Li ore (PPL), e: vein-type Li ore that shows coarse-grained lepidolite and quartz (XPL), f: vein-type Li ore (PPL). Abbreviations are as follows: Lpd;lepidolite, Elb; elbaite, Qz; quartz	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1470	BA1~7, UJ07/13/20/02/11, OLD-1~7	Photograph of white-colored altered zone that consists mainly of albite with a small amount of quartz and mica. Circles and ellipsoids represent brecciated Li ores.	미상	XRF, ICP-MS, ICP-AES, IRMS	Photograph of white-colored altered zone that consists mainly of albite with a small amount of quartz and mica. Circles and ellipsoids represent	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1471	BA1~7, UJ07/13/20/02/11, OLD-1~7	$\delta^{18}\text{O}$ versus $\delta^{13}\text{C}$ plot of country rock, Janggun Limestone near Boam Li depoists in Wangpiri, Uljin. Oxygen and carbon isotopic compositions of fresh marine limestone are from Shields and Veizer (2002).	미상	XRF, ICP-MS, ICP-AES, IRMS	$\delta^{18}\text{O}$ versus $\delta^{13}\text{C}$ plot of country rock, Janggun Limestone near Boam Li depoists in Wangpiri, Uljin. Oxygen and carbon isotopic compositions of fresh marine limestone are from Shields and Veizer (2002).	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1472	BA1~7, UJ07/13/20/02/11, OLD-1~7	Schematic diagram to depict Li mineralization in Boam Li deposits in Wangpiri, Uljin (modified after Barnes, 1997).	미상	XRF, ICP-MS, ICP-AES, IRMS	Schematic diagram to depict Li mineralization in Boam Li deposits in Wangpiri, Uljin (modified after Barnes, 1997).	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1473	BA1~7, UJ07/13/20/02/11, OLD-1~7	Concentrations of major and trace elements of lithium ores of Boam Li deposits in Wangpiri, Uljin.	미상	XRF, ICP-MS, ICP-AES, IRMS	Concentrations of major and trace elements of lithium ores of Boam Li deposits in Wangpiri, Uljin.	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1474	BA1~7, UJ07/13/20/02/11, OLD-1~7	K-Ar age dating of muscovite and lepidolite of Boam Li deposits in Wangpiri, Uljin.	미상	XRF, ICP-MS, ICP-AES, IRMS	K-Ar age dating of muscovite and lepidolite of Boam Li deposits in Wangpiri, Uljin.	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1475	BA1~7, UJ07/13/20/02/11, OLD-1~7	Oxygen and carbon isotopic compositions of Janggun Limestone located near Boam Li deposits in Wangpiri, Uljin.	미상	XRF, ICP-MS, ICP-AES, IRMS	Oxygen and carbon isotopic compositions of Janggun Limestone located near Boam Li deposits in Wangpiri, Uljin.	울진 왕피리 보암 리튬광상의 성인(지질학회지 Geol_v50n4p489)	36.905833 129.211944; 36.905833 129.233056; 36.893889 129.233056; 36.893889 129.211944
1476	AH- 16/43/41/155A/118/ 171	Tectonic map of the central part of the Korean Peninsula including the Wonju-Anheung-Pyeongchang area.	미상	SHRIMP	Tectonic map of the central part of the Korean Peninsula including the Wonju-Anheung-Pyeongchang area.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1477	AH-16/43/41/155A/118/171	Sketch geologic map of the Wonju-Anheung-Pyeongchang area, Korea, showing the locations of samples analyzed in the present study.	미상	SHRIMP	Sketch geologic map of the Wonju-Anheung-Pyeongchang area, Korea, showing the locations of samples analyzed in the present study.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1478	AH-16/43/41/155A/118/171	Outcrop photographs showing (a) Anheung fault, (b) fault surface and striation for Anheung fault, (c) main displacement zone showing R-shearing, and (d) R-shear and cataclastic foliation in the Anheung fault.	미상	SHRIMP	Outcrop photographs showing (a) Anheung fault, (b) fault surface and striation for Anheung fault, (c) main displacement zone showing R-shearing, and (d) R-shear and cataclastic foliation in the Anheung fault.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1479	AH-16/43/41/155A/118/171	Scanning electron microscope cathodoluminescence (CL) images of sectioned zircon grains from the Paleoproterozoic gneisses in the Wonju-Anheung-Pyeongchang area. The numbered spots show locations of representative SHRIMP analysis with the measured age in Ma.	미상	SHRIMP	Scanning electron microscope cathodoluminescence (CL) images of sectioned zircon grains from the Paleoproterozoic gneisses in the Wonju-Anheung-Pyeongchang area. The numbered spots show locations of representative SHRIMP analysis with the measured age in Ma.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1480	AH-16/43/41/155A/118/171	Concordia plots of SHRIMP U-Pb isotopic analyses of zircon from the Paleoproterozoic gneisses in the Wonju-Anheung-Pyeongchang area.	미상	SHRIMP	Concordia plots of SHRIMP U-Pb isotopic analyses of zircon from the Paleoproterozoic gneisses in the Wonju-Anheung-Pyeongchang area.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1481	AH-16/43/41/155A/118/171	Frequency distribution diagrams for zircon SHRIMP U-Pb and muscovite and biotite K-Ar ages from the Paleoproterozoic gneisses in the Wonju-Anheung-Pyeongchang area.	미상	SHRIMP	Frequency distribution diagrams for zircon SHRIMP U-Pb and muscovite and biotite K-Ar ages from the Paleoproterozoic gneisses in the Wonju-Anheung-Pyeongchang area.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1482	AH-16/43/41/155A/118/171	SHRIMP U-Pb data of zircons from Paleoproterozoic gneisses of the Wonju-Anheung-Pyeongchang area.	미상	SHRIMP	SHRIMP U-Pb data of zircons from Paleoproterozoic gneisses of the Wonju-Anheung-Pyeongchang area.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1483	AH-16/43/41/155A/118/171	Muscovite and biotite K-Ar age data of Paleoproterozoic gneisses from the Wonju-Anheung-Pyeongchang area.	미상	SHRIMP	Muscovite and biotite K-Ar age data of Paleoproterozoic gneisses from the Wonju-Anheung-Pyeongchang area.	한반도 중부 원주-안흥-평창 지역에 분포하는 편마암체의 지질연대학 연구(지질학회지 Geol_v50n3p327)	38.500000 128.000000; 38.500000 128.250000; 38.333333 128.250000; 38.333333 128.000000
1484	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Geologic map of the Suyoungri area.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Geologic map of the Suyoungri area.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1485	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Photomicrographs of slate samples from the Suyoungri area. (A) dark gray slate showing foliated texture consisting of muscovite and quartz, (B) black slate consisting of muscovite, coal materials, and quartz vein, (C) quartz vein containing pyrite in black slate, (D) green gray slate consisting of fine-grained muscovite and quartz, (E) coaly slate consisting of coal materials, quartz, and pyrite. (F) reflected microscopic image of coaly slate showing pyrite associated with quartz.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Photomicrographs of slate samples from the Suyoungri area. (A) dark gray slate showing foliated texture consisting of muscovite and quartz, (B) black slate consisting of muscovite, coal materials, and quartz vein, (C) quartz vein containing pyrite in black slate, (D) green gray slate consisting of fine-grained muscovite and quartz, (E) coaly slate consisting of coal materials, quartz, and pyrite. (F) reflected microscopic image of coaly slate showing pyrite associated with quartz.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1486	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Back scattered electron images and chemical compositions of uranium minerals from the Suyoungri area. (A) thorite, (B) ekanite, (C) thorutite, (D) uraninite.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Back scattered electron images and chemical compositions of uranium minerals from the Suyoungri area. (A) thorite, (B) ekanite, (C) thorutite, (D) uraninite.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1487	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	REE patterns normalized by NASC (North American Shale Composite) for (A) dark gray slate, black slates, and green gray slate, and (B) coaly slates.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	REE patterns normalized by NASC (North American Shale Composite) for (A) dark gray slate, black slates, and green gray slate, and (B) coaly slates.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1488	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Correlation between Co/Th and La/Sc for slates.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Correlation between Co/Th and La/Sc for slates.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1489	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Concentrations of some redox-sensitive elements (V, Cr, Mn, Co, Ni, Mo, Th, U), as well as Sc, Ti and Zr for (A) dark gray slate, black slates, and green gray slate, and (B) coaly slates. The values were normalized to NASC (Gromet et al., 1984), except V (Degens et al., 1958) and Mo (Wedepohl, 1974).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Concentrations of some redox-sensitive elements (V, Cr, Mn, Co, Ni, Mo, Th, U), as well as Sc, Ti and Zr for (A) dark gray slate, black slates, and green gray slate, and (B) coaly slates. The values were normalized to NASC (Gromet et al., 1984), except V (Degens et al., 1958) and Mo (Wedepohl, 1974).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1490	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Correlation between TOC with U, V, and Mo contents for slates.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Correlation between TOC with U, V, and Mo contents for slates.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1491	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Selected minor elements-Al ₂ O ₃ variation diagrams for slates.	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Selected minor elements-Al ₂ O ₃ variation diagrams for slates.	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1492	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Correlation diagram showing the Ce-La relationship (according to Toth (1980)).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Correlation diagram showing the Ce-La relationship (according to Toth (1980)).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1493	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	U-Th correlation diagram for slates (according to Bostrom (1983)).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	U-Th correlation diagram for slates (according to Bostrom (1983)).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1494	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	The concentration of major elements in samples (wt.%).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	The concentration of major elements in samples (wt.%).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1495	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	The concentration of rare earth elements in samples (ppm).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	The concentration of rare earth elements in samples (ppm).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1496	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	The concentration of trace elements in samples (ppm).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	The concentration of trace elements in samples (ppm).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1497	BS-1/11/12/31-6/64/66/21-1/21-/24/29-6/68/73/63/69/25-2/26-2/26-3/29-8/30-2/31-1	Trace elements index in anoxic environment (according to Yarincik (2000)).	미상	EPMA, XRF, TOC, ICP-MS, ICP-AES	Trace elements index in anoxic environment (according to Yarincik (2000)).	금산 수영리 우라늄광화대의 지질 및 지화학적 특성(지질학회지 Geol_v49n2p231)	36.190278 127.405556
1498	KW-1~6	Location and geological maps of the study area. (a) Map of Eumseong Basin to show the location of the study area (modified after, Choi and Choi, 2007). (b) Geological map of the study area showing the locations of localities A, B and C along the Keumwang fault.	미상	ESR	Location and geological maps of the study area. (a) Map of Eumseong Basin to show the location of the study area (modified after, Choi and Choi, 2007). (b) Geological map of the study area showing the locations of localities A, B and C along the Keumwang fault.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1499	KW-1~6	Digital elevation model (DEM) of the study area. White arrows indicate the Keumwang fault trace juxtaposed biotite granite with sedimentary rock.	미상	ESR	Digital elevation model (DEM) of the study area. White arrows indicate the Keumwang fault trace juxtaposed biotite granite with sedimentary rock.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1500	KW-1~6	Schematic map across the Keumwang fault illustrating internal structure of the fault zone. (a) Outcrop photograph of the damage zone of sheared cataclasite with shear surfaces derived from foliated cataclasite. (b) Outcrop photograph of the fault gouge of the fault core. (c) Outcrop photograph of the coarse sandstone. (d) Microphotograph of the foliated cataclasite separated 9 m from the fault core (e) Microphotograph of the deformation band (cataclastic band) developed in the sheard sandstone separated 2.5 m from the fault core (f) Microphotograph of coarse sandstone separated 11 m from the fault core.	미상	ESR	Schematic map across the Keumwang fault illustrating internal structure of the fault zone. (a) Outcrop photograph of the damage zone of sheared cataclasite with shear surfaces derived from foliated cataclasite. (b) Outcrop photograph of the fault gouge of the fault core. (c) Outcrop photograph of the coarse sandstone. (d) Microphotograph of the foliated cataclasite separated 9 m from the fault core (e) Microphotograph of the deformation band (cataclastic band) developed in the sheard sandstone separated 2.5 m from the fault core (f) Microphotograph of coarse sandstone separated 11 m from the fault core.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1501	KW-1~6	Outcrop photograph showing the internal structure of the fault zone. (a) Fault surface juxtaposed fault gouge with sheared coarse sandstone. (b) Relics of cataclasite within the fault gouge. (c) Foliated fault gouge with rounded rock fragments. (d) Foliated fault gouge with subrounded rock fragments. (e) A fault gouge band developed between fault core and fault damage zone. (f) Outcrop photograph showing the internal structure.	미상	ESR	Outcrop photograph showing the internal structure of the fault zone. (a) Fault surface juxtaposed fault gouge with sheared coarse sandstone. (b) Relics of cataclasite within the fault gouge. (c) Foliated fault gouge with rounded rock fragments. (d) Foliated fault gouge with subrounded rock fragments. (e) A fault gouge band developed between fault core and fault damage zone. (f) Outcrop photograph showing the internal structure.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1502	KW-1~6	Rose diagram of the strike of shear surfaces and bands at location A (a) and loation B (b). (c) The directional nomenclature and geometrical relationships of the structural elements (followed Rutter et al., 1986; Passchier and Trouw, 1996). Types of Riedel shears (R-, R'-, P- and Y-shears) in a brittle fault zone and S-foliation.	미상	ESR	Rose diagram of the strike of shear surfaces and bands at location A (a) and loation B (b). (c) The directional nomenclature and geometrical relationships of the structural elements (followed Rutter et al., 1986; Passchier and Trouw, 1996). Types of Riedel shears (R-, R'-, P- and Y-shears) in a brittle fault zone and S-foliation.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1503	KW-1~6	Outcrop photograph showing the R-shear band in the cataclasite zone at location B.	미상	ESR	Outcrop photograph showing the R-shear band in the cataclasite zone at location B.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256

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1504	KW-1~6	Schematic diagram across the Keumwang fault illustrating internal structure of the fault zone and sampling locations and ESR ages. (a) Fault gouge juxtaposed with sheared coarse sandstone and sampling location of KW-1 and ESR age. (b) Fault gouge juxtaposed with sheared coarse sandstone and sampling location of KW-2 and ESR age. (c) Fault gouge juxtaposed with relics of cataclasite and sampling location of KW-3 and ESR age. (d) Fault gouge and sampling location of KW-4 and ESR age. (e) A fault gouge band developed between fault core and fault damage zone and sampling locations of KW-5, 6 and ESR ages.	미상	ESR	Schematic diagram across the Keumwang fault illustrating internal structure of the fault zone and sampling locations and ESR ages. (a) Fault gouge juxtaposed with sheared coarse sandstone and sampling location of KW-1 and ESR age. (b) Fault gouge juxtaposed with sheared coarse sandstone and sampling location of KW-2 and ESR age. (c) Fault gouge juxtaposed with relics of cataclasite and sampling location of KW-3 and ESR age. (d) Fault gouge and sampling location of KW-4 and ESR age. (e) A fault gouge band developed between fault core and fault damage zone and sampling	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1505	KW-1~6	Typical examples of growth curves of ESR signals. (a) Sample of KW-3. (b) Sample of KW-4. (c) Sample of KW-5. (d) Sample of KW-6.	미상	ESR	Typical examples of growth curves of ESR signals. (a) Sample of KW-3. (b) Sample of KW-4. (c) Sample of KW-5. (d) Sample of KW-6.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1506	KW-1~6	Examples of ESR ages vs. grain sizes. (a) Sample of KW-3. (b) Sample of KW-4. (c) Sample of KW-5. (d) Sample of KW-6.	미상	ESR	Examples of ESR ages vs. grain sizes. (a) Sample of KW-3. (b) Sample of KW-4. (c) Sample of KW-5. (d) Sample of KW-6.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1507	KW-1~6	Variations of structural features of fault rocks with increasing depth (after Sibson, 1977).	미상	ESR	Variations of structural features of fault rocks with increasing depth (after Sibson, 1977).	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1508	KW-1~6	Schematic diagram across the Keumwang fault illustrating internal structure of the fault zone generated at different level. (a) The top part shows the internal structures of fault zone at over the depth of 1~4 km. (b) After uplifted and eroded, the Eumseong basin was formed by strike slip fault movements. Sedimentary rock was deposited within the basin. (c) The lowest part shows the internal structures of fault zone at below the depth of 1~4 km and over the depth of 10~15 km. The thickness of the cataclasite zone in the East side was uncertain.	미상	ESR	Schematic diagram across the Keumwang fault illustrating internal structure of the fault zone generated at different level. (a) The top part shows the internal structures of fault zone at over the depth of 1~4 km. (b) After uplifted and eroded, the Eumseong basin was formed by strike slip fault movements. Sedimentary rock was deposited within the basin. (c) The lowest part shows the internal structures of fault zone at below the depth of 1~4 km and over the depth of 10~15 km. The thickness of the cataclasite zone in	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1509	KW-1~6	Variations of distribution of fault rocks along the Keumwang fault (after Lee, 2010; Lee and Kim, 2011; Jang and Lee, 2012; Park and Lee, 2012; Hong, 2013).	미상	ESR	Variations of distribution of fault rocks along the Keumwang fault (after Lee, 2010; Lee and Kim, 2011; Jang and Lee, 2012; Park and Lee, 2012; Hong, 2013).	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256

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1510	KW-1~6	(a) Photograph of outcrop showing the boundary between ultracataclasite and fault gouge. Microphotograph of foliated fault gouge (b) and massive cataclasite (c).	미상	ESR	(a) Photograph of outcrop showing the boundary between ultracataclasite and fault gouge. Microphotograph of foliated fault gouge (b) and massive cataclasite (c).	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1511	KW-1~6	Microphotograph of massive mudstone and sheared mudstone; (a) massive mudstone, (b) sheared mudstone with anastomosing shear surfaces.	미상	ESR	Microphotograph of massive mudstone and sheared mudstone; (a) massive mudstone, (b) sheared mudstone with anastomosing shear surfaces.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1512	KW-1~6	Temporal pattern of fault activity. (a) San Andreas fault at Pallett Creek. (b) San Gabriel fault in the Little Tujunga region (after Lee and Schwarcz, 1995).	미상	ESR	Temporal pattern of fault activity. (a) San Andreas fault at Pallett Creek. (b) San Gabriel fault in the Little Tujunga region (after Lee and Schwarcz, 1995).	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1513	KW-1~6	Amount of U, Th, K for each sample of fault gouge.	미상	ESR	Amount of U, Th, K for each sample of fault gouge.	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1514	KW-1~6	Analytical data for ESR dating of fault gouge. Weighted mean is calculated from the ESR ages within the plateau (shown as rectangle in column of ESR age).	미상	ESR	Analytical data for ESR dating of fault gouge. Weighted mean is calculated from the ESR ages within the plateau (shown as rectangle in column of ESR age).	충청북도 음성군 일대에 분포하는 금왕단층의 특성 및 ESR 연대(지질학회지 Geol_v48n6p473)	36.933781 127.537256; 36.933781 127.574919; 36.901811 127.574919; 36.901811 127.537256
1515	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Simplified geological map of Jeju Island after Lee (1982), and a sample location. Locations for Jeju tholeiite volcanism are also shown: 1, Sinheungri; 2, Seonheulri; 3, Deockcheonri; 4, Dwikkubuni-oreum; 5, Eunweolbong; 6, Moguri-oreum; 7, Bonji-oreum; 8, Aseumseoni; 9, Mojioreum; 10, Isidol; 11, Suweolbong; 12, Yeongjusan; 13, Dusanbong; 14, Udo; 15, Marado. Data sources: Park and Kwon (1996), Koh et al. (2008), Park et al. (1999), Brenna et al. (2010, 2012), and Koh and Park (2010a).	미상	SEM, XRF	Simplified geological map of Jeju Island after Lee (1982), and a sample location. Locations for Jeju tholeiite volcanism are also shown: 1, Sinheungri; 2, Seonheulri; 3, Deockcheonri; 4, Dwikkubuni-oreum; 5, Eunweolbong; 6, Moguri-oreum; 7, Bonji-oreum; 8, Aseumseoni; 9, Mojioreum; 10, Isidol; 11, Suweolbong; 12, Yeongjusan; 13, Dusanbong; 14, Udo; 15, Marado. Data sources: Park and Kwon (1996), Koh et al. (2008), Park et al. (1999), Brenna et al. (2010, 2012), and Koh and Park (2010a).	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1516	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Photomicrographs for (a) Taeheungri host basalt (cross-polarized light) and (b - f) plagioclase-rich nodules (cross-polarized light). See text for details. Scale bar = 1 mm. Abbreviations: OL = olivine, CPX = clinopyroxene, PL = plagioclase.	미상	SEM, XRF	Photomicrographs for (a) Taeheungri host basalt (cross-polarized light) and (b - f) plagioclase-rich nodules (cross-polarized light). See text for details. Scale bar = 1 mm. Abbreviations: OL = olivine, CPX = clinopyroxene, PL =	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906

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1517	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Classification of Jeju volcanic rocks in terms of SiO ₂ vs. total alkalies (Le Bas et al., 1986). Boundary line dividing alkaline and sub-alkaline series from Irvine and Baragar (1971). Data sources: Lee (1982), Park and Kwon (1993a, c), Lee et al. (1994), Won et al. (1995), Park and Kwon (1996), Park et al. (1998), Yun et al. (2002), Tatsumi et al. (2005), Chang et al. (2006), Koh et al. (2008), and Koh and Park (2010a, b).	미상	SEM, XRF	Classification of Jeju volcanic rocks in terms of SiO ₂ vs. total alkalies (Le Bas et al., 1986). Boundary line dividing alkaline and sub-alkaline series from Irvine and Baragar (1971). Data sources: Lee (1982), Park and Kwon (1993a, c), Lee et al. (1994), Won et al. (1995), Park and Kwon (1996), Park et al. (1998), Yun et al. (2002), Tatsumi et al. (2005), Chang et al. (2006), Koh et al. (2008), and Koh and Park (2010a, b).	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1518	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Clinopyroxene compositions for plagioclase-rich nodules, host basalt and Jeju volcanic rocks. Wo, wollastonite; En, enstatite; Fs, ferrosilite. Data sources: Lee (1982), Park and Kwon (1993c), Chang et al. (1999), Tatsumi et al., (2005), Eom et al. (2007), and Brenna et al. (2012).	미상	SEM, XRF	Clinopyroxene compositions for plagioclase-rich nodules, host basalt and Jeju volcanic rocks. Wo, wollastonite; En, enstatite; Fs, ferrosilite. Data sources: Lee (1982), Park and Kwon (1993c), Chang et al. (1999), Tatsumi et al., (2005), Eom et al. (2007), and Brenna et al. (2012).	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1519	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	An#(=100Ca/(Ca + Na + K)) vs. Or#(=100K/(Ca + Na + K)) for plagioclases in plagioclase-rich nodules, host basalt and Jeju volcanic rocks. Also shown are the fields for plagioclases from Hawaiian volcanic rocks. Data sources: Hawaiian volcanic rocks (Keil et al., 1972; Basaltic Volcanism Study Project, 1981), and Jeju volcanic rocks (Lee, 1982; Park and Kwon, 1993c, 1996; Chang et al., 1999; Tatsumi et al., 2005).	미상	SEM, XRF	An#(=100Ca/(Ca + Na + K)) vs. Or#(=100K/(Ca + Na + K)) for plagioclases in plagioclase-rich nodules, host basalt and Jeju volcanic rocks. Also shown are the fields for plagioclases from Hawaiian volcanic rocks. Data sources: Hawaiian volcanic rocks (Keil et al., 1972; Basaltic Volcanism Study Project, 1981), and Jeju volcanic rocks (Lee, 1982; Park and Kwon, 1993c, 1996; Chang et al., 1999; Tatsumi et al., 2005).	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1520	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Major element concentrations (wt%) for olivines from plagioclase-rich nodule and the host basalt.	미상	SEM, XRF	Major element concentrations (wt%) for olivines from plagioclase-rich nodule and the host basalt.	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1521	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Major element concentrations (wt%) for clinopyroxenes from plagioclase-rich nodule and the host basalt.	미상	SEM, XRF	Major element concentrations (wt%) for clinopyroxenes from plagioclase-rich nodule and the host basalt.	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1522	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Major element concentrations (wt%) for plagioclases from plagioclase-rich nodule and the host basalt.	미상	SEM, XRF	Major element concentrations (wt%) for plagioclases from plagioclase-rich nodule and the host basalt.	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906
1523	JNWH2B, JMW3-4H/2-4H/2-7H/1-4/2-2/2-3	Whole-rock major element concentrations (wt%) for the Taeheungri host basalt.	미상	SEM, XRF	Whole-rock major element concentrations (wt%) for the Taeheungri host basalt.	제주 남원지역의 태흥리 현무암에 포획되어 있는 사장석 단괴에 대한 성인연구: 슬라이트 계열의 화성활동에 대한 고찰 (지질학회지 Geol_v48n4p313)	33.271614 126.700906

학술논문자료 시료등록 메타데이터 목록

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1524	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Generalized geological map of the Jeju Island showing (a) the present-day geodynamic setting along the eastern margin of Eurasian plate (after Tatsumi et al., 2005) and (b) stratigraphic relationships of volcanic rocks (after Lee, 1982 and Chang et al., 1999) showing sample locality (Sinsanri).	미상	SEM, 주성분분석	Generalized geological map of the Jeju Island showing (a) the present-day geodynamic setting along the eastern margin of Eurasian plate (after Tatsumi et al., 2005) and (b) stratigraphic relationships of volcanic rocks (after Lee, 1982 and Chang et al., 1999) showing sample locality (Sinsanri).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1525	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Modal composition and photography of thick section for the studied pyroxenite xenoliths from Sinsanri, Jeju Island. (a) Ternary diagram (Ol-Opx-Cpx) from Streckeisen (1976). (b) Olivine websterite and a very irregular contact with lherzolite (a dotted curve) is noted. (c) Websterite and (d) Clinopyroxenite and a contact with websterite (a dotted curve) is noted. Ol=olivine, Opx=orthopyroxene, Cpx= clinopyroxene.	미상	SEM, 주성분분석	Modal composition and photography of thick section for the studied pyroxenite xenoliths from Sinsanri, Jeju Island. (a) Ternary diagram (Ol-Opx-Cpx) from Streckeisen (1976). (b) Olivine websterite and a very irregular contact with lherzolite (a dotted curve) is noted. (c) Websterite and (d) Clinopyroxenite and a contact with websterite (a dotted curve) is noted. Ol=olivine, Opx=orthopyroxene, Cpx=	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1526	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Photomicrographs of pyroxenite xenoliths from Sinsanri, Jeju Island. Except photo "b" taken under plain-polarized light, all photos were taken under cross-polarized light. (a) Olivine websterite xenolith containing coarse-grained orthopyroxene with banded clinopyroxene lamellae and kink banding is noted. Fine-grained, recrystallized pyroxenes without exsolution lamella (top right and botton left in the photo) are also compared. (b) Olivine websterite xenolith showing spinel symplectite blebs in large clinopyroxene. Elongated orthopyroxene without exsolution lamella can be compared with the coarse-grained orthopyroxene in photo "a". (c) Websterite xenolith containing coarse-grained orthopyroxene with exsolution lamella in the center and lamella-free margin is noted. (d) Fine-grained orthopyroxene between coarse-grained clinopyroxene is shown with more linear grain boundaries compared with those in photo "a". (e) A single clinopyroxenite xenolith showing optical continuity, but different orientation of orthopyroxene exsolution lamellae is noted. Fine-grained orthopyroxene and clinopyroxene assemblages crosscutting the megacryst is also shown. (f) A irregular contact between clinopyroxene megacryst and websterite is noted. Orthopyroxene exsolution patch (a red arrow) or fine-grained pyroxene without internal deformation is shown and compared with large orthopyroxene with kink banding and exsolution lamella on the left. Ol= olivine, Opx=orthopyroxene, Cpx=clinopyroxene, Sp=spinel	미상	SEM, 주성분분석	Photomicrographs of pyroxenite xenoliths from Sinsanri, Jeju Island. Except photo "b" taken under plain-polarized light, all photos were taken under cross-polarized light. (a) Olivine websterite xenolith containing coarse-grained orthopyroxene with banded clinopyroxene lamellae and kink banding is noted. Fine-grained, recrystallized pyroxenes without exsolution lamella (top right and botton left in the photo) are also compared. (b) Olivine websterite xenolith showing spinel symplectite blebs in large clinopyroxene. Elongated orthopyroxene without exsolution lamella can be compared with the coarse-grained orthopyroxene in photo "a". (c) Websterite xenolith containing coarse-grained orthopyroxene with exsolution lamella in the center and lamella-free margin is noted. (d) Fine-grained orthopyroxene between coarse-grained clinopyroxene is shown with more linear grain boundaries compared with those in photo "a". (e) A single clinopyroxenite xenolith showing optical continuity, but	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581

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1527	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of FeO, MnO and NiO vs MgO for olivine of olivine websterite xenoliths from Sinsanri, Jeju Island comparing with compositional range of olivine from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	SEM, 주성분분석	Plots of FeO, MnO and NiO vs MgO for olivine of olivine websterite xenoliths from Sinsanri, Jeju Island comparing with compositional range of olivine from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1528	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of Al ₂ O ₃ and MnO vs MgO for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of orthopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	SEM, 주성분분석	Plots of Al ₂ O ₃ and MnO vs MgO for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of orthopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1529	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of Al ₂ O ₃ , CaO, Na ₂ O and TiO ₂ vs MgO for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of clinopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	SEM, 주성분분석	Plots of Al ₂ O ₃ , CaO, Na ₂ O and TiO ₂ vs MgO for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of clinopyroxene from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1530	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Plots of Cr ₂ O ₃ and TiO ₂ vs MgO for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of spinel from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	미상	SEM, 주성분분석	Plots of Cr ₂ O ₃ and TiO ₂ vs MgO for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island comparing with compositional range of spinel from harzburgite-spinel lherzolite from Jeju Island (Choi et al., 2001; Kil et al., 2008; Yu et al., 2010).	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1531	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Modal composition and lithology for the studied pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	SEM, 주성분분석	Modal composition and lithology for the studied pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1532	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for olivine of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	SEM, 주성분분석	Major element concentrations (wt.%) for olivine of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1533	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	SEM, 주성분분석	Major element concentrations (wt.%) for orthopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1534	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	SEM, 주성분분석	Major element concentrations (wt.%) for clinopyroxene of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581
1535	09SS26A, 11SS7, 09SS192, 10SS14, 09SS19, 09SS191	Major element concentrations (wt.%) for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island.	미상	SEM, 주성분분석	Major element concentrations (wt.%) for spinel of pyroxenite xenoliths from Sinsanri, Jeju Island.	제주도 신산리 알칼리 현무암에 포획된 휘석암의 암석학적 특성(지질학회지 Geol_v48n4p299)	33.385786 126.867581; 33.385786 126.881225; 33.370614 126.881225; 33.370614 126.867581

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1536	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	(A) Regional geological and structural map of the Miocene basin province, SE Korea (after Son, 1998). (B) Topographic map showing the location of the study area (Boxed area).	미상	XRF, SEM	(A) Regional geological and structural map of the Miocene basin province, SE Korea (after Son, 1998). (B) Topographic map showing the location of the study area (Boxed area).	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1537	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Detailed geological map and representative cross sections of the Seongdongri area with the localities of columnar logs and sampling sites. Analysed data of the geochemical study are referred to table 3.	미상	XRF, SEM	Detailed geological map and representative cross sections of the Seongdongri area with the localities of columnar logs and sampling sites. Analysed data of the geochemical study are referred to table 3.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1538	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Outcrop photographs showing (A) a contact between the Janggi Conglomerate and the underlying Seongdongri Formation, (B) the closer view of the boxed area in figure A, and (C, D) the Noeseongsan Basaltic rock conformably overlying the Seongdongri Formation.	미상	XRF, SEM	Outcrop photographs showing (A) a contact between the Janggi Conglomerate and the underlying Seongdongri Formation, (B) the closer view of the boxed area in figure A, and (C, D) the Noeseongsan Basaltic rock conformably overlying the Seongdongri	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1539	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Outcrop photographs showing the major features of the Seongdongri Formation. (A) Dacitic lapilli tuffs alternated with dacitic tuffaceous sediments. Massive dacitic lapilli tuffs and well-stratified tuffaceous sediments are dipping toward NW direction. (B) Well-stratified, well-sorted dacitic ash tuff dipping toward SE direction. (C) Non-welded, poorly-sorted, matrix-supported, pumiceous, and lithic-rich dacitic lapilli tuff dominantly containing pumice and dark coloured lithic fragments. (D) Lapilli sized, sub-angular to sub-rounded, protruding, and dark coloured lithic fragments in the dacitic tuff. (E) Well-preserved carbonized woods (dotted ellipse) in the dacitic lapilli tuff. (F) Leaf fossil in the dacitic tuffaceous sediments.	미상	XRF, SEM	Outcrop photographs showing the major features of the Seongdongri Formation. (A) Dacitic lapilli tuffs alternated with dacitic tuffaceous sediments. Massive dacitic lapilli tuffs and well-stratified tuffaceous sediments are dipping toward NW direction. (B) Well-stratified, well-sorted dacitic ash tuff dipping toward SE direction. (C) Non-welded, poorly-sorted, matrix-supported, pumiceous, and lithic-rich dacitic lapilli tuff dominantly containing pumice and dark coloured lithic fragments. (D) Lapilli sized, sub-angular to sub-rounded, protruding, and dark coloured lithic fragments in the dacitic tuff. (E) Well-preserved carbonized woods (dotted ellipse) in the dacitic lapilli tuff. (F) Leaf fossil in the dacitic tuffaceous sediments.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1540	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Representative columnar sections of the stratotype of the Seongdongri Formation. See figure 2 for the outcrop locations and table 2 for the detailed description of the each unit.	미상	XRF, SEM	Representative columnar sections of the stratotype of the Seongdongri Formation. See figure 2 for the outcrop locations and table 2 for the detailed description of the each unit.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967

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1541	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Thin-section photomicrographs showing the petrographical features of the dacitic lapilli tuffs in the Seongdongri Formation (Open nicol). (A, B) Dacitic lapilli tuffs with lithic fragments of eutaxitic textured pumice (P), exotic lithic fragment (LF), and crystal fragments of quartz (Q), plagioclase (Pl), and glass (Gl). (C, D) Matrix of the dacitic lapilli tuff showing very fine-grained, cusped shaped shards (Sh) and eutaxitic textured pumice clasts (P).	미상	XRF, SEM	Thin-section photomicrographs showing the petrographical features of the dacitic lapilli tuffs in the Seongdongri Formation (Open nicol). (A, B) Dacitic lapilli tuffs with lithic fragments of eutaxitic textured pumice (P), exotic lithic fragment (LF), and crystal fragments of quartz (Q), plagioclase (Pl), and glass (Gl). (C, D) Matrix of the dacitic lapilli tuff showing very fine-grained, cusped shaped shards (Sh) and eutaxitic textured pumice clasts (P).	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1542	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Outcrop photographs showing the major features of the Noeseongsan Basaltic rock. (A) Intrusive basalt showing complex columnar-joint pattern in the Mt. Noeseong. (B) Basaltic dike intruding into the dacitic tuff of the Seongdongri Formation. (C) Extrusive contact between the basaltic lava and the underlying the dacitic tuffaceous sediments of the Seongdongri Formation. (D) Basaltic lava showing well-developed flow layers that dipping toward SE direction.	미상	XRF, SEM	Outcrop photographs showing the major features of the Noeseongsan Basaltic rock. (A) Intrusive basalt showing complex columnar-joint pattern in the Mt. Noeseong. (B) Basaltic dike intruding into the dacitic tuff of the Seongdongri Formation. (C) Extrusive contact between the basaltic lava and the underlying the dacitic tuffaceous sediments of the Seongdongri Formation. (D) Basaltic lava showing well-developed flow layers that dipping	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1543	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Outcrop photographs showing the major features of the basaltic tuff breccias in the Noeseongsan Basaltic rock. (A) Poorly stratified basaltic tuff breccia dipping toward NE direction. (B) Basaltic tuff breccia including diverse sized and angular-shaped basaltic volcaniclasts. (C) Clast-supported basaltic agglomerate. (D) Irregular shaped, vesicular and porphyritic basaltic fluidal-clast with reentrant margins.	미상	XRF, SEM	Outcrop photographs showing the major features of the basaltic tuff breccias in the Noeseongsan Basaltic rock. (A) Poorly stratified basaltic tuff breccia dipping toward NE direction. (B) Basaltic tuff breccia including diverse sized and angular-shaped basaltic volcaniclasts. (C) Clast-supported basaltic agglomerate. (D) Irregular shaped, vesicular and porphyritic basaltic fluidal-clast with reentrant	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1544	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Thin-section photomicrographs showing the petrographical features of (A) the basaltic lava, (B) the basaltic dike, and (C) the clast and (D) matrix of the basaltic tuff in the Noeseongsan Basaltic rock, respectively, with minerals of plagioclase (Pl), clinopyroxene (Cpx), and olivine (Ol) (Crossed nicol). The basaltic rocks in the study area showing (A) the porphyritic texture and (B, C) the trachytic texture. The matrix of the basaltic tuff showing glassy and vesicular texture.	미상	XRF, SEM	Thin-section photomicrographs showing the petrographical features of (A) the basaltic lava, (B) the basaltic dike, and (C) the clast and (D) matrix of the basaltic tuff in the Noeseongsan Basaltic rock, respectively, with minerals of plagioclase (Pl), clinopyroxene (Cpx), and olivine (Ol) (Crossed nicol). The basaltic rocks in the study area showing (A) the porphyritic texture and (B, C) the trachytic texture. The matrix of the basaltic tuff showing glassy and	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1545	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	(A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ (after Irvine and Baragar, 1971; Cox et al., 1979) and (B) AFM diagram (after Kuno, 1968) for the matrix (circles) and dark colored lithic fragments (triangles) in the dacitic lapilli tuffs, and the basaltic rocks (squares). Analysed data are referred to the Table 3.	미상	XRF, SEM	(A) Plot of Na ₂ O+K ₂ O vs. SiO ₂ (after Irvine and Baragar, 1971; Cox et al., 1979) and (B) AFM diagram (after Kuno, 1968) for the matrix (circles) and dark colored lithic fragments (triangles) in the dacitic lapilli tuffs, and the basaltic rocks (squares). Analysed data are referred to the Table 3.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1546	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	(A, B, C) C1 chondrite normalized REE patterns (normalized data from Sun and McDough, 1989) and (D, E, F) N-type MORB normalized spider diagrams for trace elements (normalized data from Sun and McDough, 1989) of the matrix (left) and the dark coloured lithic fragments (center) in the dacitic tuffs and the basaltic rocks (right), respectively. Symbols are the same as those used in the Fig. 11.	미상	XRF, SEM	(A, B, C) C1 chondrite normalized REE patterns (normalized data from Sun and McDough, 1989) and (D, E, F) N-type MORB normalized spider diagrams for trace elements (normalized data from Sun and McDough, 1989) of the matrix (left) and the dark coloured lithic fragments (center) in the dacitic tuffs and the basaltic rocks (right), respectively. Symbols are the same as those used in the Fig. 11.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1547	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	(A) Structural map of the study area showing the traces of bedding of the strata which containing the dacitic volcanic materials. Stereographic projections and rose diagrams showing the distribution of poles to bedding and their dip directions in the NW block (B) and the SE block (C), respectively. Lower-hemisphere, equal-area stereographic projection.	미상	XRF, SEM	(A) Structural map of the study area showing the traces of bedding of the strata which containing the dacitic volcanic materials. Stereographic projections and rose diagrams showing the distribution of poles to bedding and their dip directions in the NW block (B) and the SE block (C), respectively. Lower-hemisphere, equal-area stereographic projection.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1548	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Contoured π - (lower hemisphere, equal-area stereo projection) and rose diagrams of dikes (A) and faults (B) in the study area.	미상	XRF, SEM	Contoured π - (lower hemisphere, equal-area stereo projection) and rose diagrams of dikes (A) and faults (B) in the study area.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1549	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Photographs of slabs of the dacitic lapilli tuffs in the Seongdongri Formation showing the similar petrographical features, each of which were collected from different localities and from the various formations nominated by Tateiwa (1924). All the slabs showing the features of slightly to highly altered, slightly to non-welded, poorly-sorted, matrix-supported, pumiceous and lithic-rich dacitic lapilli tuffs with dark coloured lithic fragments (LF) and pumices (P).	미상	XRF, SEM	Photographs of slabs of the dacitic lapilli tuffs in the Seongdongri Formation showing the similar petrographical features, each of which were collected from different localities and from the various formations nominated by Tateiwa (1924). All the slabs showing the features of slightly to highly altered, slightly to non-welded, poorly-sorted, matrix-supported, pumiceous and lithic-rich dacitic lapilli tuffs with dark coloured lithic fragments	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1550	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Outcrop photographs and photomicrographs showing the major features of the Lower Basaltic Tuff nominated by Tateiwa (1924). (A) Abnormally dark-colored and highly altered tuffs and tuffaceous sediments overlain by crudely stratified dacitic tuffaceous sediments. (B) The tuffs containing lots of pumice clasts and (C) exotic dark coloured lithic fragments. (D) Photomicrograph of the dark coloured lithic fragment showing the trachytic texture with minerals of plagioclase (Pl) and opaque (Oq). (E, F) Photomicrographs of the matrix of the tuffs showing the highly altered pumiceous fragments (P), crystal fragments of quartz (Q) and plagioclase (Pl), and glass (Gl).	미상	XRF, SEM	Outcrop photographs and photomicrographs showing the major features of the Lower Basaltic Tuff nominated by Tateiwa (1924). (A) Abnormally dark-colored and highly altered tuffs and tuffaceous sediments overlain by crudely stratified dacitic tuffaceous sediments. (B) The tuffs containing lots of pumice clasts and (C) exotic dark coloured lithic fragments. (D) Photomicrograph of the dark coloured lithic fragment showing the trachytic texture with minerals of plagioclase (Pl) and opaque (Oq). (E, F) Photomicrographs of the matrix of the tuffs showing the highly altered pumiceous fragments (P), crystal fragments of quartz (Q) and plagioclase	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1551	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Correlation of the stratigraphies of the study area from Tateiwa (1924), Yoon (1992), and this study.	미상	XRF, SEM	Correlation of the stratigraphies of the study area from Tateiwa (1924), Yoon (1992), and this study.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1552	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Characteristics of the depositional unit in the representative cross sections of the Seongdongri Formation in the figure 6.	미상	XRF, SEM	Characteristics of the depositional unit in the representative cross sections of the Seongdongri Formation in the figure 6.	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1553	25/34, 111B/F/M, 201/233/356/431/43 5/661/1116/1024/11 30/1157/1185/1187/ 1195/1199	Major (wt.%) and trace element abundances (ppm) of the matrix (201, 233 L2, 233 L3, 1024) and the dark coloured lithic fragments of the dacitic tuff (201 La, 201 Lb, 1116, 1157) and the basaltic dikes (34, 435), lavas (356, 431, 1130, 1187, 1199), and breccias (25, 111B, 111F, 111M, 661, 1185, 1195).	미상	XRF, SEM	Major (wt.%) and trace element abundances (ppm) of the matrix (201, 233 L2, 233 L3, 1024) and the dark coloured lithic fragments of the dacitic tuff (201 La, 201 Lb, 1116, 1157) and the basaltic dikes (34, 435), lavas (356, 431, 1130, 1187, 1199), and breccias (25, 111B, 111F, 111M, 661, 1185, 1195).	한반도 남동부 포항시 장기면 북부일원의 마이오세 분지충전물의 분대와 이원성 화산활동(지질학회지 Geol_v47n6p585)	35.949353 129.453967; 35.949353 129.553292; 35.895892 129.553292; 35.895892 129.453967
1554	BJ10	Geologic map of the Mungyeong area showing distribution of Sangnaeri Formation as well as Baekhwari Amphibolite. Sample locations for the SHRIMP U-Pb zircon age determinations are also shown.	Isoplot/Ex	SHRIMP	Geologic map of the Mungyeong area showing distribution of Sangnaeri Formation as well as Baekhwari Amphibolite. Sample locations for the SHRIMP U-Pb zircon age determinations are also shown.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거(지질학회지 Geol_v47n2p155)	36.671833 128.036694
1555	BJ10	Photograph of the rock sample from the Sangnaeri Formation, used for the zircon separation of this study (left) and microphotograph of the thin-section of this sample; open nicol (middle) and crossed nicols (right). Scale bar of the microphotograph indicates 300 μ m.	Isoplot/Ex	SHRIMP	Photograph of the rock sample from the Sangnaeri Formation, used for the zircon separation of this study (left) and microphotograph of the thin-section of this sample; open nicol (middle) and crossed nicols (right). Scale bar of the microphotograph indicates 300 μ m.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거(지질학회지 Geol_v47n2p155)	36.671833 128.036694

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1556	BJ10	Cathodoluminescence images with spot U-Pb ages for the analyzed zircons from the Sangnaeri Formation. Isotopic ratios and apparent 206Pb/238U ages >1,000 Ma were calculated on the basis of 204Pb correction method, but apparent ages <1,000 Ma were calculated on the basis of 207Pb correction method (Williams, 1998).	Isoplot/Ex	SHRIMP	Cathodoluminescence images with spot U-Pb ages for the analyzed zircons from the Sangnaeri Formation. Isotopic ratios and apparent 206Pb/238U ages >1,000 Ma were calculated on the basis of 204Pb correction method, but apparent ages <1,000 Ma were calculated on the basis of 207Pb correction method (Williams, 1998).	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거(지질학회지 Geol_v47n2p155)	36.671833 128.036694
1557	BJ10	Tera-Wasserburg plot for the zircons separated from the Sangnaeri Formation.	Isoplot/Ex	SHRIMP	Tera-Wasserburg plot for the zircons separated from the Sangnaeri Formation.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거(지질학회지)	36.671833 128.036694
1558	BJ10	Concordia age obtained from the youngest populations of the zircons separated from the Sangnaeri Formation.	Isoplot/Ex	SHRIMP	Concordia age obtained from the youngest populations of the zircons separated from the Sangnaeri	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거(지질학회지)	36.671833 128.036694
1559	BJ10	SHRIMP U-Pb zircon data of the Sangnaeri Formation in Mungyeong area, Korea.	Isoplot/Ex	SHRIMP	SHRIMP U-Pb zircon data of the Sangnaeri Formation in Mungyeong area, Korea.	문경지역 옥천변성대 상내리층과 백화리 각섬암의 생성시기: SHRIMP U-Pb 저어콘 연령 증거(지질학회지)	36.671833 128.036694
1560	07KOH-1~60	Distribution map of various types of sericite deposits(Geologic map is from KIGAM, 1995).	미상	ICP-OES, INAA	Distribution map of various types of sericite deposits(Geologic map is from KIGAM, 1995).	경북 봉화군 대현 견운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1561	07KOH-1~60	Geologic map of the Daehyun sericite deposit area(modified from 1:50,000 Seobeok and Jangseong sheet).	미상	ICP-OES, INAA	Geologic map of the Daehyun sericite deposit area(modified from 1:50,000 Seobeok and Jangseong sheet).	경북 봉화군 대현 견운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1562	07KOH-1~60	Photomicrographs of the Hongjesa granite(A and B) and the intruded pegmatite(C and D). Q: Quartz, M: Muscovite, Pl: Plagioclase, Bt: Biotite, Per: Perthite, Mic: Microcline.	미상	ICP-OES, INAA	Photomicrographs of the Hongjesa granite(A and B) and the intruded pegmatite(C and D). Q: Quartz, M: Muscovite, Pl: Plagioclase, Bt: Biotite, Per: Perthite, Mic: Microcline.	경북 봉화군 대현 견운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1563	07KOH-1~60	Photograph showing sericitic alteration zone deposited in the unconformity between the Paleozoic Jangsan Quartzite and the Proterozoic Hongjesa granite(A), sketch map showing sampling point(B), photograph of the open pit area(C), and sericite ores occurring in the open pit area(D and E).	미상	ICP-OES, INAA	Photograph showing sericitic alteration zone deposited in the unconformity between the Paleozoic Jangsan Quartzite and the Proterozoic Hongjesa granite(A), sketch map showing sampling point(B), photograph of the open pit area(C), and sericite ores occurring in the open pit area(D and E).	경북 봉화군 대현 견운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1564	07KOH-1~60	Microphotographs of weakly sericitic altered rock(A and B), moderately sericitic altered rock(C and D), and strongly sericitic altered rock(E and F). Q: Quartz, Mic: Microcline, M: Muscovite, Ser: Sericite, Pl: Plagioclase, Ch: Chlorite, T: Tourmaline.	미상	ICP-OES, INAA	Microphotographs of weakly sericitic altered rock(A and B), moderately sericitic altered rock(C and D), and strongly sericitic altered rock(E and F). Q: Quartz, Mic: Microcline, M: Muscovite, Ser: Sericite, Pl: Plagioclase, Ch: Chlorite, T: Tourmaline.	경북 봉화군 대현 견운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1565	07KOH-1~60	Map showing the detailed geology, distribution of main ore body, and old underground tunnel.	미상	ICP-OES, INAA	Map showing the detailed geology, distribution of main ore body, and old underground tunnel.	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1566	07KOH-1~60	Underground situation of Seonghwanggaeng of the Daehyun sericite deposit(A), alteration zonation map of the middle level(B) and lower level(C) in the underground and sampling points(B and C).	미상	ICP-OES, INAA	Underground situation of Seonghwanggaeng of the Daehyun sericite deposit(A), alteration zonation map of the middle level(B) and lower level(C) in the underground and sampling points(B and C).	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1567	07KOH-1~60	X-ray diffraction patterns of the weakly altered, moderately altered, and strongly altered rocks.	미상	ICP-OES, INAA	X-ray diffraction patterns of the weakly altered, moderately altered, and strongly altered rocks.	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1568	07KOH-1~60	Variation diagram of major elements of the hosted Hongjesa granite, pegmatite, and three types of altered rocks. 1:Hongjesa granite, 2:Pegmatite, 3:Weakly altered rock, 4: Moderately altered rock, 5:Strongly altered rock(The bar means the compositional range of each oxide).	미상	ICP-OES, INAA	Variation diagram of major elements of the hosted Hongjesa granite, pegmatite, and three types of altered rocks. 1:Hongjesa granite, 2:Pegmatite, 3:Weakly altered rock, 4: Moderately altered rock, 5:Strongly altered rock(The bar means the compositional range of	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1569	07KOH-1~60	Variation diagram of Rb, Sr, U, Th, Ba, Cr, and Zr of the hosted Hongjesa granite, pegmatite, and three types of altered rocks. 1:Hongjesa granite, 2:Pegmatite, 3:Weakly altered rock, 4:Moderately altered rock, 5:Strongly altered rock(The bar means the compositional range of each trace element).	미상	ICP-OES, INAA	Variation diagram of Rb, Sr, U, Th, Ba, Cr, and Zr of the hosted Hongjesa granite, pegmatite, and three types of altered rocks. 1:Hongjesa granite, 2:Pegmatite, 3:Weakly altered rock, 4:Moderately altered rock, 5:Strongly altered rock(The bar means the compositional range of each trace	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1570	07KOH-1~60	Diagram showing the age data of the Hongjesa granite, pegmatite and sericite(HG: Hongjesa granite, PEG:Pegmatite, URA:Uraninite, and SER:Sericite).	미상	ICP-OES, INAA	Diagram showing the age data of the Hongjesa granite, pegmatite and sericite(HG: Hongjesa granite, PEG:Pegmatite, URA:Uraninite, and SER:Sericite).	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1571	07KOH-1~60	Schematic diagram showing the geological formation environment of the Daehyun sericite deposit.	미상	ICP-OES, INAA	Schematic diagram showing the geological formation environment of the Daehyun sericite deposit.	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1572	07KOH-1~60	Chemical compositions of major oxides of the hosted Hongjesa granite, pegmatite and three types of altered rocks(unit:wt%)	미상	ICP-OES, INAA	Chemical compositions of major oxides of the hosted Hongjesa granite, pegmatite and three types of altered rocks(unit:wt%)	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1573	07KOH-1~60	Chemical compositions of trace elements of the hosted Hongjesa granite, pegmatite, and three types of altered rocks(S:wt%, the others:ppm)	미상	ICP-OES, INAA	Chemical compositions of trace elements of the hosted Hongjesa granite, pegmatite, and three types of altered rocks(S:wt%, the others:ppm)	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로 운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342

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1574	07KOH-1~60	K-Ar ages of sericite and muscovite occurring in the Daehyun sericite deposits	미상	ICP-OES, INAA	K-Ar ages of sericite and muscovite occurring in the Daehyun sericite deposits	경북 봉화군 대현 건운모광상의 지질학적 형성환경 및 광화시기: 국내에서의 새로운 유형 소개(지질학회지 Geol_v44n4p365)	37.079133 128.958342; 37.079133 129.138642; 37.033758 129.138642; 37.033758 128.958342
1575	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Geologic map of the study area modified after Park et al.(1997). ①: Otanri, ②: Guwoonri, ③: Nolgimol, ④: Seoojiri. IB: Imjingang Belt; GM: Gyeonggi Massif; OB: Okcheon Belt; YM: Yeongnam Massif; GB: Gyeongsang Basin.	미상	ICP-MS	Geologic map of the study area modified after Park et al.(1997). ①: Otanri, ②: Guwoonri, ③: Nolgimol, ④: Seoojiri. IB: Imjingang Belt; GM: Gyeonggi Massif; OB: Okcheon Belt; YM: Yeongnam Massif; GB: Gyeongsang Basin.	춘천 오타리에 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1576	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Sketch geological map of the Otanri area, Chuncheon showing distribution of hornblende gabbro(Rag, Pag) and diorite as well as sample locations. Rag: rounded amphibole gabbro; Pag: prismatic amphibole gabbro.	미상	ICP-MS	Sketch geological map of the Otanri area, Chuncheon showing distribution of hornblende gabbro(Rag, Pag) and diorite as well as sample locations. Rag: rounded amphibole gabbro; Pag: prismatic amphibole gabbro.	춘천 오타리에 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1577	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Harker variation diagram of major elements for the hornblende gabbro and diorite in Otanri, Chuncheon.	미상	ICP-MS	Harker variation diagram of major elements for the hornblende gabbro and diorite in Otanri, Chuncheon.	춘천 오타리에 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1578	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Harker variation diagram of trace elements for the hornblende gabbro and diorite in Otanri, Chuncheon.	미상	ICP-MS	Harker variation diagram of trace elements for the hornblende gabbro and diorite in Otanri, Chuncheon.	춘천 오타리에 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1579	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Spider diagram showing average trace element concentrations of hornblende gabbro (Rag, Pag) and diorite in Otanri normalized to the composition of the MORB by Pearce (1983).	미상	ICP-MS	Spider diagram showing average trace element concentrations of hornblende gabbro (Rag, Pag) and diorite in Otanri normalized to the composition of the MORB by Pearce (1983).	춘천 오타리에 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778

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1580	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Chondrite-normalized average REE patterns of hornblende gabbro (Rag, Pag) and diorite in Otanri normalized to the composition of the chondrite by Nakamura (1974) and Boynton(1984). Rag and Pag show parallel variation REE pattern, which is suggestive of a generation of Rag and Pag through a differentiation from a single magma. Different slopes ((La/Lu)CN) shown in REE patterns between hornblende gabbro(Rag, Pag) and diorite are thought to indicate that hornblende gabbro and diorite in Otanri were originated from two distinct magmas derived from common source rocks by different degree of partial melting.	미상	ICP-MS	Chondrite-normalized average REE patterns of hornblende gabbro (Rag, Pag) and diorite in Otanri normalized to the composition of the chondrite by Nakamura (1974) and Boynton(1984). Rag and Pag show parallel variation REE pattern, which is suggestive of a generation of Rag and Pag through a differentiation from a single magma. Different slopes ((La/Lu)CN) shown in REE patterns between hornblende gabbro(Rag, Pag) and diorite are thought to indicate that hornblende gabbro and diorite in Otanri were originated from two distinct magmas derived from common source rocks by different degree of partial melting.	춘천 오타리에서 분포하는 각섬석 반력암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1581	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Bivariate diagrams of highly incompatible elements(Hf vs Zr, Y vs Ho, Y vs Tb) with similar distribution coefficients, and bivariate ratio plots of Th/Tb vs Th/K, Th/Tb vs Th/Ba, and Th/Tb vs Th/Tb for hornblende gabbro and diorite in Otanri, Chuncheon. The two different trends shown in bivariate ratio plots for hornblende gabbro and diorite are thought to indicate that they were originated from two magma pulses derived from same source material.	미상	ICP-MS	Bivariate diagrams of highly incompatible elements(Hf vs Zr, Y vs Ho, Y vs Tb) with similar distribution coefficients, and bivariate ratio plots of Th/Tb vs Th/K, Th/Tb vs Th/Ba, and Th/Tb vs Th/Tb for hornblende gabbro and diorite in Otanri, Chuncheon. The two different trends shown in bivariate ratio plots for hornblende gabbro and diorite are thought to indicate that they were originated from two magma pulses derived from same source material.	춘천 오타리에서 분포하는 각섬석 반력암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1582	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	The Y-Cr tectonic environment discrimination diagram of the hornblende gabbro-diorite Complex in Otanri, Chuncheon (Pearce, 1982). Hornblende gabbro and diorite in Otanri, Chuncheon are plotted in VAB area, which indicates magmas responsible for generation of hornblende gabbro and diorite in the study area were derived from source rocks affected by subduction of crustal materials sometime ago. VAB: volcanic-arc basalts, MORB: mid-ocean ridge basalts, WPB: within-plate basalts.	미상	ICP-MS	The Y-Cr tectonic environment discrimination diagram of the hornblende gabbro-diorite Complex in Otanri, Chuncheon (Pearce, 1982). Hornblende gabbro and diorite in Otanri, Chuncheon are plotted in VAB area, which indicates magmas responsible for generation of hornblende gabbro and diorite in the study area were derived from source rocks affected by subduction of crustal materials sometime ago. VAB: volcanic-arc basalts, MORB: mid-ocean ridge	춘천 오타리에서 분포하는 각섬석 반력암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778

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1583	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	The Nb/8-Y/15-La/10 discrimination diagram of the hornblende gabbro-diorite Complex in Otanri, Chuncheon (Cabains and Lecolle, 1989). 1A: calc-alkali basalts, 1C: volcanic-arc tholeiites, 1B is an area of overlap between 1A and 1C, 2A: continental basalts, 2B: back-arc basin basalts, 3A: alkali basalts from intercontinental rift, 3B, 3C: E-type MORB(3B enriched, 3C weakly enriched), 3D: N-type MORB.	미상	ICP-MS	The Nb/8-Y/15-La/10 discrimination diagram of the hornblende gabbro-diorite Complex in Otanri, Chuncheon (Cabains and Lecolle, 1989). 1A: calc-alkali basalts, 1C: volcanic-arc tholeiites, 1B is an area of overlap between 1A and 1C, 2A: continental basalts, 2B: back-arc basin basalts, 3A: alkali basalts from intercontinental rift, 3B, 3C: E-type MORB(3B enriched, 3C weakly enriched), 3D: N-type MORB.	춘천 오타리예 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1584	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Mineral mode of the hornblende gabbro-diorite complex in Otanri, Chuncheon.	미상	ICP-MS	Mineral mode of the hornblende gabbro-diorite complex in Otanri, Chuncheon.	춘천 오타리예 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1585	110415-s, 81608, 81602, 81606, 100409, 100424, 81612, 100507, 100415-p, 100423, 120508, 81607, 122103, 81605, 112808, 110420	Concentrations of major elements, trace elements, and rare earth elements of hornblende gabbro(Rag, Pag) and diorite in Otanri, Chuncheon.	미상	ICP-MS	Concentrations of major elements, trace elements, and rare earth elements of hornblende gabbro(Rag, Pag) and diorite in Otanri, Chuncheon.	춘천 오타리예 분포하는 각섬석 반려암-섬록암 복합체의 성인(지질학회지 Geol_v43n4p437)	38.159722 127.577778; 38.159722 127.679167; 38.020833 127.679167; 38.020833 127.577778
1586	YGS-1~3	Geologic map of the trench site (after Kang and Im, 1974).	미상	ESR, OSL	Geologic map of the trench site (after Kang and Im, 1974).	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1587	YGS-1~3	Sampling locations for OSL dating of sediments and OSL ages in the trench (after Kyung and Rhee, personal communication).	미상	ESR, OSL	Sampling locations for OSL dating of sediments and OSL ages in the trench (after Kyung and Rhee, personal communication).	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1588	YGS-1~3	Growth curves for E'(a), OHC (b) and Al (c) signal intensities of Jy 1. Details of the growth curve for E' signal intensities from 0 Gy to the 1200 Gy of added dose (d).	미상	ESR, OSL	Growth curves for E'(a), OHC (b) and Al (c) signal intensities of Jy 1. Details of the growth curve for E' signal intensities from 0 Gy to the 1200 Gy of added	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1589	YGS-1~3	Growth curves for E'(a), OHC (b) and Al (c) signal intensities of Jy 5. Details of the growth curve for E' signal intensities from 0 Gy to the 1200 Gy of added dose (d).	미상	ESR, OSL	Growth curves for E'(a), OHC (b) and Al (c) signal intensities of Jy 5. Details of the growth curve for E' signal intensities from 0 Gy to the 1200 Gy of added	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1590	YGS-1~3	Examples of equivalent dose determination based on single aliquot regenerative-dose (SAR) protocol for the sample YGS-1 (a), for the sample YGS-2 (b) and for the sample YGS-3 (c). Three different regeneration doses (L_x , $x = 1, 2, 3$) were given and the regenerated OSL data were corrected for sensitivity changes by dividing by the subsequent OSL test dose response (T_x , $x = 1, 2, 3$), and the ratios (L_x/T_x , $x = 1, 2, 3$) are shown as open circles. Also shown are the sensitivity corrected natural OSL response (LN/TN) and repeat point (L_x/T_x , $x = 4$), indicated by open square and open triangle. A preheating is for 10 s at 260 °C and the curve is fitted by a single saturation exponential function to the regenerated data points.	미상	ESR, OSL	Examples of equivalent dose determination based on single aliquot regenerative-dose (SAR) protocol for the sample YGS-1 (a), for the sample YGS-2 (b) and for the sample YGS-3 (c). Three different regeneration doses (L_x , $x = 1, 2, 3$) were given and the regenerated OSL data were corrected for sensitivity changes by dividing by the subsequent OSL test dose response (T_x , $x = 1, 2, 3$), and the ratios (L_x/T_x , $x = 1, 2, 3$) are shown as open circles. Also shown are the sensitivity corrected natural OSL response (LN/TN) and repeat point (L_x/T_x , $x = 4$), indicated by open square and open triangle. A preheating is for 10 s at 260 °C and the curve is fitted by a single saturation exponential function to the regenerated data points.	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1591	YGS-1~3	The SAR (Single-Aliquot Regenerative-Dose) protocol used in this study.	미상	ESR, OSL	The SAR (Single-Aliquot Regenerative-Dose) protocol used in this study.	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1592	YGS-1~3	Equivalent dose values determined using SAR protocol.	미상	ESR, OSL	Equivalent dose values determined using SAR protocol.	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1593	YGS-1~3	OSL dating results.	미상	ESR, OSL	OSL dating results.	충남 연기군의 한 트랜치 노두에서 ESR 및 OSL 수치연대측정을 이용한 단층의 활동시기 제한(지질학회지 Geol_v43n3p335)	36.642250 127.166389; 36.642250 127.205278; 36.613000 127.205278; 36.613000 127.166389
1594	B/104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/192	A map showing the study areas and the distribution of the Daegi Formation. A= Seokgaejae section, B= Sangdong section, C= Cheondongri section, D= Baekjeonri section, E= Hwaamri section, and F= Nakdongri section.	미상	EDS, AAS; ICP-AES	A map showing the study areas and the distribution of the Daegi Formation. A= Seokgaejae section, B= Sangdong section, C= Cheondongri section, D= Baekjeonri section, E= Hwaamri section, and F= Nakdongri section.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1595	BJ104/113/32/103/2 4/115/54/87/69/64/ 75/72/141/161/145/ 85/83/79/38/17/7/4 3/164/163, HA83/104/82/66/46/ 60/68/75/71/48/107 /175/173/52/98/200 /192/169/90/198/19 3	Scanning electron (A~D) and polarized (E, F) microscope photomicrographs and corresponding cathodoluminescent images of calcite crystals in crystalline limestone, which has the same color index (no. 4, light gray). Note the contacts between calcite crystals are convex-concaved or sutured. A) 4~15 µm, B) 15~25 µm, C) 25~50 µm, D) 50~75 µm, E) 75~100 µm, F) 100~200 µm, H) CL5, I) CL3~4, J) CL3~4, K) CL 2 and L) CL 2.	미상	EDS, AAS; ICP-AES	Scanning electron (A~D) and polarized (E, F) microscope photomicrographs and corresponding cathodoluminescent images of calcite crystals in crystalline limestone, which has the same color index (no. 4, light gray). Note the contacts between calcite crystals are convex-concaved or sutured. A) 4~15 µm, B) 15~25 µm, C) 25~50 µm, D) 50~75 µm, E) 75~100 µm, F) 100~200 µm, H) CL5, I) CL3~4, J) CL3~4, K) CL 2	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1596	BJ104/113/32/103/2 4/115/54/87/69/64/ 75/72/141/161/145/ 85/83/79/38/17/7/4 3/164/163, HA83/104/82/66/46/ 60/68/75/71/48/107 /175/173/52/98/200 /192/169/90/198/19	Scatter diagram for crystal size vs. rock color. Note that the rocks with color index greater than 4 only contain calcite crystals larger than 150 µm. 1(◆,◇) = very dark gray, 2(■,□) = dark gray, 3(▲,△) = gray, 4(●,○) = light gray, 5(*,-) = very light gray, 6(x,+) = white, BJ = Baekjeonri section, HA = Hwaamri section.	미상	EDS, AAS; ICP-AES	Scatter diagram for crystal size vs. rock color. Note that the rocks with color index greater than 4 only contain calcite crystals larger than 150 µm. 1(◆,◇) = very dark gray, 2(■,□) = dark gray, 3(▲,△) = gray, 4(●,○) = light gray, 5(*,-) = very light gray, 6(x,+) = white, BJ = Baekjeonri section, HA = Hwaamri section.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1597	BJ104/113/32/103/2 4/115/54/87/69/64/ 75/72/141/161/145/ 85/83/79/38/17/7/4 3/164/163, HA83/104/82/66/46/ 60/68/75/71/48/107 /175/173/52/98/200 /192/169/90/198/19	Scatter diagram of oxygen vs. carbon isotope for crystalline limestone at the Baekjeonri and Hwaamri sections according to rock colors. Symbols denote different rock colors. ◆(◇) = very dark gray, ■(□) = dark gray, ▲(△) = gray, ●(○) = light gray, *(-) = very light gray, x(+) = white.	미상	EDS, AAS; ICP-AES	Scatter diagram of oxygen vs. carbon isotope for crystalline limestone at the Baekjeonri and Hwaamri sections according to rock colors. Symbols denote different rock colors. ◆(◇) = very dark gray, ■(□) = dark gray, ▲(△) = gray, ●(○) = light gray, *(-) = very light gray, x(+) = white.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1598	BJ104/113/32/103/2 4/115/54/87/69/64/ 75/72/141/161/145/ 85/83/79/38/17/7/4 3/164/163, HA83/104/82/66/46/ 60/68/75/71/48/107 /175/173/52/98/200 /192/169/90/198/19	Fig. 6. Ranges of the oxygen isotope values of crystalline limestone at the Baekjeonri (A) and Hwaamri (B) section according to rock color.	미상	EDS, AAS; ICP-AES	Fig. 6. Ranges of the oxygen isotope values of crystalline limestone at the Baekjeonri (A) and Hwaamri (B) section according to rock color.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1599	BJ104/113/32/103/2 4/115/54/87/69/64/ 75/72/141/161/145/ 85/83/79/38/17/7/4 3/164/163, HA83/104/82/66/46/ 60/68/75/71/48/107 /175/173/52/98/200 /192/169/90/198/19	Scatter diagram of oxygen vs. carbon isotope for crystalline limestone at the Baekjeonri (A) and Hwaamri (B) sections according to crystal size.	미상	EDS, AAS; ICP-AES	Scatter diagram of oxygen vs. carbon isotope for crystalline limestone at the Baekjeonri (A) and Hwaamri (B) sections according to crystal size.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978

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1600	03104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Outcrop photograph of the Daegi Formation at the Nakdongri section in Jeongseon, showing the basic dyke cross-cutting the crystalline limestone. A traverse of the oxygen isotope values away from the dyke is also shown.	미상	EDS, AAS; ICP-AES	Outcrop photograph of the Daegi Formation at the Nakdongri section in Jeongseon, showing the basic dyke cross-cutting the crystalline limestone. A traverse of the oxygen isotope values away from the dyke is also shown.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1601	03104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Scatter diagram of Fe vs. Mn (A) and Mg vs. Na (B) for crystalline limestone at the Baekjeonri and Hwaamri sections. ◆(◇) = very dark gray, ■(□) = dark gray, ▲(△) = gray, ●(○) = light gray, *(-) = very light gray, ×(+) = white.	미상	EDS, AAS; ICP-AES	Scatter diagram of Fe vs. Mn (A) and Mg vs. Na (B) for crystalline limestone at the Baekjeonri and Hwaamri sections. ◆(◇) = very dark gray, ■(□) = dark gray, ▲(△) = gray, ●(○) = light gray, *(-) = very light gray, ×(+) = white.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1602	03104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Cathodoluminescent characters vs. Mn/Fe ratio (After Machel, 2000). Relatively large crystals are mostly located in the dull luminescent field. MF = 4~15 µm, CF = 15~25 µm, FM = 25~50 µm, MM = 50~75 µm, CM = 75~100 µm, FC = 100~200 µm, MC = 200~300 µm, and CC = larger than 300 µm.	미상	EDS, AAS; ICP-AES	Cathodoluminescent characters vs. Mn/Fe ratio (After Machel, 2000). Relatively large crystals are mostly located in the dull luminescent field. MF = 4~15 µm, CF = 15~25 µm, FM = 25~50 µm, MM = 50~75 µm, CM = 75~100 µm, FC = 100~200 µm, MC = 200~300 µm, and CC = larger than 300 µm.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1603	03104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Schematic diagram showing the relationship between oxygen isotopic composition of water, oxygen isotopic composition of calcite and the temperature of calcite formation. The shaded area denotes the range of the formation of crystalline limestone in this study.	미상	EDS, AAS; ICP-AES	Schematic diagram showing the relationship between oxygen isotopic composition of water, oxygen isotopic composition of calcite and the temperature of calcite formation. The shaded area denotes the range of the formation of crystalline limestone in this study.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1604	03104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Percentage of insoluble residue in the Daegi Formation. All the three sections show the higher percentage in the lower part. Shaded zone= high-purity limestone horizon. ?= presumed horizon at Seokgaejae section.	미상	EDS, AAS; ICP-AES	Percentage of insoluble residue in the Daegi Formation. All the three sections show the higher percentage in the lower part. Shaded zone= high-purity limestone horizon. ?= presumed horizon at Seokgaejae section.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1605	03/104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Stratigraphic division of the Lower Paleozoic Joseon Supergroup.	미상	EDS, AAS; ICP-AES	Stratigraphic division of the Lower Paleozoic Joseon Supergroup.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1606	03/104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Classification criteria of crystalline limestone in the Daegi Formation.	미상	EDS, AAS; ICP-AES	Classification criteria of crystalline limestone in the Daegi Formation.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1607	03/104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Stable isotopic and chemical compositions of crystalline limestones in the Daegi Formation.	미상	EDS, AAS; ICP-AES	Stable isotopic and chemical compositions of crystalline limestones in the Daegi Formation.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1608	03/104/115/52/103/24/115/54/87/69/64/75/72/141/161/145/85/83/79/38/17/7/43/164/163, HA83/104/82/66/46/60/68/75/71/48/107/175/173/52/98/200/192/169/90/198/19	Textural, stable isotopic and chemical data of the crystalline limestones collected away from the dyke at Nakdongri section.	미상	EDS, AAS; ICP-AES	Textural, stable isotopic and chemical data of the crystalline limestones collected away from the dyke at Nakdongri section.	대기층 내에 나타나는 결정질 석회암(고품위 석회석)의 조직 및 지화학적 특징(지질학회지 Geol_v42n4p561)	37.426128 128.295978; 37.426128 129.061506; 36.860681 129.061506; 36.860681 128.295978
1609	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Geologic map of the southeastern area of the Korean peninsula. Modified from Kee et al.(2003).	미상	ESR	Geologic map of the southeastern area of the Korean peninsula. Modified from Kee et al.(2003).	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1610	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Photograph and field sketch of the outcrop showing the sampling location at Jwadongri site.	미상	ESR	Photograph and field sketch of the outcrop showing the sampling location at Jwadongri site.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061

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1611	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Photographs of the Doya trench site showing the sampling locations.	미상	ESR	Photographs of the Doya trench site showing the sampling locations.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1612	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Stereogram of faults at Seosaeng 1 site(a) and Seosaeng 2 site(b).	미상	ESR	Stereogram of faults at Seosaeng 1 site(a) and Seosaeng 2 site(b).	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1613	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Photographs of outcrops at Seosaeng 1 and Seosaeng 2 site showing the sampling locations.	미상	ESR	Photographs of outcrops at Seosaeng 1 and Seosaeng 2 site showing the sampling locations.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1614	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Photographs and field sketch of outcrops at Hwajeong 1 site showing the sampling locations.	미상	ESR	Photographs and field sketch of outcrops at Hwajeong 1 site showing the sampling locations.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1615	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Photographs and field sketch of outcrops at Hwajeong 2 site showing the sampling locations.	미상	ESR	Photographs and field sketch of outcrops at Hwajeong 2 site showing the sampling locations.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1616	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Growth curves for E'(a) and Al(b) signals of Trc 1. Growth curves for Al signal of Doya 1-1(c), and Doya 1-3(d).	미상	ESR	Growth curves for E'(a) and Al(b) signals of Trc 1. Growth curves for Al signal of Doya 1-1(c), and Doya 1-3(d).	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1617	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Examples of ESR ages vs. grain sizes for Trc 1(a), Doya 1-1(b), and Doya 1-3(c).	미상	ESR	Examples of ESR ages vs. grain sizes for Trc 1(a), Doya 1-1(b), and Doya 1-3(c).	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1618	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Growth curves for E' signal of F2-1-1(a). Growth curves for Al signal of F2-1-2(b) and F2-1-5(c).	미상	ESR	Growth curves for E' signal of F2-1-1(a). Growth curves for Al signal of F2-1-2(b) and F2-1-5(c).	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1619	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Examples of ESR ages vs. grain sizes for F2-1-1(a), F2-1-2(b), and F2-1-5 (c).	미상	ESR	Examples of ESR ages vs. grain sizes for F2-1-1(a), F2-1-2(b), and F2-1-5 (c).	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1620	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	Map of ESR age of fault rocks in the study area.	미상	ESR	Map of ESR age of fault rocks in the study area.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1621	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	ESR analytical data and results for fault gouge collected from the study area.	미상	ESR	ESR analytical data and results for fault gouge collected from the study area.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1622	Trc1b/1D, Doya 1-1C/1D/3B/3D/3E, F2-1-1B/1C/1D/1E/1F/2B/2C/2D/2E/5B	ESR age estimates for the time of last activation of fault rocks in the study area.	미상	ESR	ESR age estimates for the time of last activation of fault rocks in the study area.	일광단층의 ESR 연대측정(지질학회지 Geol_v41n3p369)	35.401119 129.155061; 35.401119 129.318961; 35.200008 129.318961; 35.200008 129.155061
1623	1~18	Location of the study area with sampling sites and studied sections. Numbered sites indicate that the location of volcanic rock samples for major element analyses.	미상	TOC, XRF	Location of the study area with sampling sites and studied sections. Numbered sites indicate that the location of volcanic rock samples for	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1624	1~18	Stratigraphic section showing the main lithologic changes throughout the Shinyangri Formation. Slightly modified from Han et al.(1987) and Kim et al.(1999).	미상	TOC, XRF	Stratigraphic section showing the main lithologic changes throughout the Shinyangri Formation. Slightly modified from Han et al.(1987) and Kim et al.(1999).	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1625	1~18	Variations in total carbon (TC), total hydrogen (TH), total nitrogen (TN) and total sulphur (TS) of samples from Section 1 (S1). For the location see Fig. 1. SD=sand dune; B=beach.	미상	TOC, XRF	Variations in total carbon (TC), total hydrogen (TH), total nitrogen (TN) and total sulphur (TS) of samples from Section 1 (S1). For the location see Fig. 1. SD=sand dune; B=beach.	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1626	1~18	Variations in total carbon (TC), total hydrogen (TH), total nitrogen (TN) and total sulphur (TS) of samples from Section 2 (S2; closed circles) and Section 3 (S3; shaded circles).	미상	TOC, XRF	Variations in total carbon (TC), total hydrogen (TH), total nitrogen (TN) and total sulphur (TS) of samples from Section 2 (S2; closed circles) and Section 3 (S3; shaded circles).	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1627	1~18	Variations in total organic carbon (TOC), hydrogen index (HI), S2 and oxygen index (OI) of samples from Section 1 (S1).	미상	TOC, XRF	Variations in total organic carbon (TOC), hydrogen index (HI), S2 and oxygen index (OI) of samples from Section 1 (S1).	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1628	1~18	Variations in total organic carbon (TOC), hydrogen index (HI), S2 and oxygen index (OI) of samples from Section 2 (S2; closed circles) and Section 3 (S3; shaded circles).	미상	TOC, XRF	Variations in total organic carbon (TOC), hydrogen index (HI), S2 and oxygen index (OI) of samples from Section 2 (S2; closed circles) and Section 3 (S3; shaded circles).	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467

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1629	1~18	Discriminant diagrams of organic-matter types based on crossplottings of (a) TN and TOC, (b) TS and TOC, (c) S2 and TOC, and (d) HI and Tmax. Triangle indicates sand dune (SD) and beach (B), whereas open and closed circles represent the upper (US) and lower (LS) Shinyangri Formation.	미상	TOC, XRF	Discriminant diagrams of organic-matter types based on crossplottings of (a) TN and TOC, (b) TS and TOC, (c) S2 and TOC, and (d) HI and Tmax. Triangle indicates sand dune (SD) and beach (B), whereas open and closed circles represent the upper (US) and lower (LS) Shinyangri Formation.	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1630	1~18	Major element composition of the Shinyangri Formation and basaltic rocks in the adjacent areas. Volcanic stages from Lee et al.(1982). For the sample location (No. 1~9) see Fig. 1.	미상	TOC, XRF	Major element composition of the Shinyangri Formation and basaltic rocks in the adjacent areas. Volcanic stages from Lee et al.(1982). For the sample location (No. 1~9) see Fig. 1.	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1631	1~18	Results of geochemical analyses of the Shinyangri Formation (upper part) in the eastern Jeju Island. S section number, D depth (cm) in section, TS total sulphur, TC total carbon, TH total hydrogen, TN total nitrogen, HI hydrogen index, OI oxygen index, TOC total organic carbon, and MC mineral carbon.	미상	TOC, XRF	Results of geochemical analyses of the Shinyangri Formation (upper part) in the eastern Jeju Island. S section number, D depth (cm) in section, TS total sulphur, TC total carbon, TH total hydrogen, TN total nitrogen, HI hydrogen index, OI oxygen index, TOC total organic carbon, and MC mineral carbon.	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1632	1~18	Results of geochemical analyses of the Shinyangri Formation (lower part) in the eastern Jeju Island. S section number, D depth (cm) in section, TS total sulphur, TC total carbon, TH total hydrogen, TN total nitrogen, HI hydrogen index, OI oxygen index, TOC total organic carbon, and MC mineral carbon.	미상	TOC, XRF	Results of geochemical analyses of the Shinyangri Formation (lower part) in the eastern Jeju Island. S section number, D depth (cm) in section, TS total sulphur, TC total carbon, TH total hydrogen, TN total nitrogen, HI hydrogen index, OI oxygen index, TOC total organic carbon, and MC mineral carbon.	제주도 동부지역 제4기 신양리층의 지화학적 특성 연구(지질학회지 Geol_v41n1p019)	33.479053 126.868467; 33.479053 126.953644; 33.409225 126.953644; 33.409225 126.868467
1633	JS-10, 1074D, SJS-1	Geologic map around the Shinjeongseon ore deposit.	미상	가열냉각기	Geologic map around the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1634	JS-10, 1074D, SJS-1	Underground geologic map of "C" adit of the Shinjeongseon mine.	미상	가열냉각기	Underground geologic map of "C" adit of the Shinjeongseon mine.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836

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1635	JS-10, 1074D, SJS-1	Microphotographs of sulfide minerals from the Shinjeongseon deposit. A: stage II galena replacing stage I sphalerite and disseminated in altered host rock. B: stage II galena replacing hostrock and stage I pyrite. C: stage I pyrite and sphalerite were cut and replaced by stage II galena. D: arsenopyrite replacing pyrite. E: galena were re-precipitated after early stage II calcite precipitation. F: pyragyrite in stage II galena. G: pyragyrite in stage II galena. H: electrum in stage II galena. I: native silver, argentite, canfieldite and argyrodite assemblage in stage II galena. J: argyrodite in sphalerite. K: canfieldite and stannite?III occurred in sphalerite with rim structure. L: canfieldite and stannite?III (enlarged photo K). Abbreviation; Py: Pyrite, Gn: Galena, Sl: Sphalerite, Asp: Arsenopyrite, Pyra: Pyragyrite, El: Electrum, Argyr: Argyrodite, NAg: Native silver, Canf: Canfieldite, StanIII: Stannite?III, Carb: Carbonate.	미상	가열냉각기	Microphotographs of sulfide minerals from the Shinjeongseon deposit. A: stage II galena replacing stage I sphalerite and disseminated in altered host rock. B: stage II galena replacing hostrock and stage I pyrite. C: stage I pyrite and sphalerite were cut and replaced by stage II galena. D: arsenopyrite replacing pyrite. E: galena were re-precipitated after early stage II calcite precipitation. F: pyragyrite in stage II galena. G: pyragyrite in stage II galena. H: electrum in stage II galena. I: native silver, argentite, canfieldite and argyrodite assemblage in stage II galena. J: argyrodite in sphalerite. K: canfieldite and stannite?III occurred in sphalerite with rim structure. L: canfieldite and stannite?III (enlarged photo K). Abbreviation; Py: Pyrite, Gn: Galena, Sl: Sphalerite, Asp: Arsenopyrite, Pyra: Pyragyrite, El: Electrum, Argyr: Argyrodite, NAg: Native silver, Canf:	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1636	JS-10, 1074D, SJS-1	The position of tin minerals from Shinjeongseon deposit on Cu/(Cu+Sn) vs. Fe/(Fe+Zn) (after Petruk, 1973).	미상	가열냉각기	The position of tin minerals from Shinjeongseon deposit on Cu/(Cu+Sn) vs. Fe/(Fe+Zn) (after Petruk, 1973).	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1637	JS-10, 1074D, SJS-1	Mineral paragenesis of the Shinjeongseon deposit.	미상	가열냉각기	Mineral paragenesis of the Shinjeongseon deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1638	JS-10, 1074D, SJS-1	Microphotographs of fluid inclusions in sphalerite (stage I) and calcite (stage II) from the Shinjeongseon deposit. A: CO2-bearing inclusion (type IV-B) and liquid inclusion (type I) in sphalerite (stage I). B: Pure CO2 inclusion (type IV-A). C: CO2-bearing inclusion in sphalerite (stage I). D: liquid inclusion (type II) in calcite (stage II). E: Co-existing liquid inclusion (type II) and gas inclusion (type III) in calcite (stage II). Abbreviation; G: Gas, L: Liquid, CO2: CO2.	미상	가열냉각기	Microphotographs of fluid inclusions in sphalerite (stage I) and calcite (stage II) from the Shinjeongseon deposit. A: CO2-bearing inclusion (type IV-B) and liquid inclusion (type I) in sphalerite (stage I). B: Pure CO2 inclusion (type IV-A). C: CO2-bearing inclusion in sphalerite (stage I). D: liquid inclusion (type II) in calcite (stage II). E: Co-existing liquid inclusion (type II) and gas inclusion (type III) in calcite (stage II). Abbreviation; G: Gas, L: Liquid, CO2:	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1639	JS-10, 1074D, SJS-1	Histograms for salinity and homogenization temperature of the fluid inclusions from the Shinjeongseon deposit.	미상	가열냉각기	Histograms for salinity and homogenization temperature of the fluid inclusions from the Shinjeongseon deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836

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1640	JS-10, 1074D, SJS-1	Diagram showing formation temperature and pressure of mineralization, Shinjeongseon deposit. The formation condition of Stage I is calculated from intersection of two isochore (Roedder and Bodnar, 1980). The formation condition of the Stage II is calculated from boiling effect (Hass, 1971).	미상	가열냉각기	Diagram showing formation temperature and pressure of mineralization, Shinjeongseon deposit. The formation condition of Stage I is calculated from intersection of two isochore (Roedder and Bodnar, 1980). The formation condition of the Stage II is calculated from boiling effect (Hass,	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1641	JS-10, 1074D, SJS-1	Oxygen fugacity vs. sulfur fugacity diagram showing stability fields of tin minerals in the Shinjeongseon deposit (data from Patterson et al., 1981).	미상	가열냉각기	Oxygen fugacity vs. sulfur fugacity diagram showing stability fields of tin minerals in the Shinjeongseon deposit (data from Patterson et al., 1981).	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1642	JS-10, 1074D, SJS-1	K-Ar ages of whole-rock and minerals from the Jeongseon granitoids and the Shinjeongseon ore deposits.	미상	가열냉각기	K-Ar ages of whole-rock and minerals from the Jeongseon granitoids and the Shinjeongseon ore deposits.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1643	JS-10, 1074D, SJS-1	Microprobe analyses of stage I and II sphalerite from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of stage I and II sphalerite from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1644	JS-10, 1074D, SJS-1	Microprobe analyses of arsenopyrite from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of arsenopyrite from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1645	JS-10, 1074D, SJS-1	Microprobe analyses of electrum and native silver from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of electrum and native silver from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1646	JS-10, 1074D, SJS-1	Microprobe analyses of pyragyrite from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of pyragyrite from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1647	JS-10, 1074D, SJS-1	Microprobe analyses of stannite from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of stannite from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1648	JS-10, 1074D, SJS-1	Microprobe analyses of stanmte?III m samples from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of stanmte?III m samples from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1649	JS-10, 1074D, SJS-1	Microprobe analyses of canfieldite in samples from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of canfieldite in samples from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1650	JS-10, 1074D, SJS-1	Microprobe analyses of argyrodite in samples from the Shinjeongseon ore deposit.	미상	가열냉각기	Microprobe analyses of argyrodite in samples from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1651	JS-10, 1074D, SJS-1	Characteristics of fluid inclusions from the Shinjeongseon ore deposit.	미상	가열냉각기	Characteristics of fluid inclusions from the Shinjeongseon ore deposit.	신정선 연-아연 광상의 광석광물과 유체 포유물 연구(지질학회지 Geol_v36n2p093)	37.378197 128.665836; 37.378197 128.708303; 37.343889 128.708303; 37.343889 128.665836
1652	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Geological map of the study area (modified from Son and Kim, 1994). K-Ar isotope data from Lee et al. (1997). 1. Alluvium, 2. Jeongja Conglomerate, 3. Dangsa Andesite, 4. Porphyritic Biotite Granite, 5. Rhyodacite, 6. Ulsan Formation (a: purple shale, sandstone, grayish green shale, b: hornfels), 7. Mipo Fault.	미상	XRF, ICP-MS	Geological map of the study area (modified from Son and Kim, 1994). K-Ar isotope data from Lee et al. (1997). 1. Alluvium, 2. Jeongja Conglomerate, 3. Dangsa Andesite, 4. Porphyritic Biotite Granite, 5. Rhyodacite, 6. Ulsan Formation (a: purple shale, sandstone, grayish green shale, b: hornfels), 7. Mipo	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1653	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Sampling sites and litho- facies map of the granitic rocks and metamorphic rocks.	미상	XRF, ICP-MS	Sampling sites and litho- facies map of the granitic rocks and metamorphic rocks.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1654	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Quartz(Q)-alkali feldspar(A)-plagioclase(P) ternary diagram for the granitic rocks after Streckeisen (1976). Symbols: ○ ; enclave poor porphyritic biotite granite, ●; enclave rich porphyritic biotite granite, ●; A-type enclave, ◆; B-type enclave, ■; C-type enclave.	미상	XRF, ICP-MS	Quartz(Q)-alkali feldspar(A)-plagioclase(P) ternary diagram for the granitic rocks after Streckeisen (1976). Symbols: ○ ; enclave poor porphyritic biotite granite, ●; enclave rich porphyritic biotite granite, ●; A-type enclave, ◆; B-type enclave, ■; C-type	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1655	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	X-ray diffraction patterns of hornfels. The sample sites get farther from the granite as going downward. (A) Eastern part of Mipo fault. (B) Western part of Mipo fault.	미상	XRF, ICP-MS	X-ray diffraction patterns of hornfels. The sample sites get farther from the granite as going downward. (A) Eastern part of Mipo fault. (B) Western part of	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1656	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Fe/(Fe+Mg) vs. Al (IV) diagram of biotites. Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	Fe/(Fe+Mg) vs. Al (IV) diagram of biotites. Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1657	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	(A) Plots of FeO*-MgO-Al ₂ O ₃ biotite discriminant diagram from Abdel-Rahman (1994). (B) Plots of FeO*-Al ₂ O ₃ biotite discriminant diagram from Abdel-Rahman (1994). Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	(A) Plots of FeO*-MgO-Al ₂ O ₃ biotite discriminant diagram from Abdel-Rahman (1994). (B) Plots of FeO*-Al ₂ O ₃ biotite discriminant diagram from Abdel-Rahman (1994). Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1658	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Harker variation diagram for the granites and enclaves. Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	Harker variation diagram for the granites and enclaves. Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1659	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	(A) Plots of Na ₂ O+K ₂ O vs. SiO ₂ for the granites and enclaves of the study area (after Irvine and Baragar, 1971). (B) AFM diagram for the granites and enclaves of the study area (after Irvine and Baragar, 1971). Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	(A) Plots of Na ₂ O+K ₂ O vs. SiO ₂ for the granites and enclaves of the study area (after Irvine and Baragar, 1971). (B) AFM diagram for the granites and enclaves of the study area (after Irvine and Baragar, 1971). Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1660	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Molar Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O) vs. molar Al ₂ O ₃ /(Na ₂ O+K ₂ O) diagram. Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	Molar Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O) vs. molar Al ₂ O ₃ /(Na ₂ O+K ₂ O) diagram. Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1661	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Normative Q-Ab-Or triangular diagram showing cotectic lines and compositions of lfcO-saturated minimum and eutectic melts at given pressures (after Tuttle and Bowen, 1958). The plotted are granitic rocks of the study area. Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	Normative Q-Ab-Or triangular diagram showing cotectic lines and compositions of lfcO-saturated minimum and eutectic melts at given pressures (after Tuttle and Bowen, 1958). The plotted are granitic rocks of the study area. Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1662	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	1 kbar isobaric equilibrium diagram showing phase relationships for the system Qz-Ab-Or-H ₂ O projectde onto the anhydrous base of the tetrahedron Qz-Ab-Or-H ₂ O (after Tuttle and Bowen, 1958). The plotted are granitic rocks of the study area. Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	1 kbar isobaric equilibrium diagram showing phase relationships for the system Qz-Ab-Or-H ₂ O projectde onto the anhydrous base of the tetrahedron Qz-Ab-Or-H ₂ O (after Tuttle and Bowen, 1958). The plotted are granitic rocks of the study area. Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1663	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Variation diagram for ΣREE vs. SiO ₂ from the granitic rocks. Symbols are the same as those in Fig. 3.	미상	XRF, ICP-MS	Variation diagram for ΣREE vs. SiO ₂ from the granitic rocks. Symbols are the same as those in Fig. 3.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1664	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Modal analyses (in vol.%) of granites and enclaves.	미상	XRF, ICP-MS	Modal analyses (in vol.%) of granites and enclaves.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1665	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Petrographical features of various types of enclaves.	미상	XRF, ICP-MS	Petrographical features of various types of enclaves.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1666	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Chemical composition and structural fonnula of biotite from the granites and enclaves.	미상	XRF, ICP-MS	Chemical composition and structural fonnula of biotite from the granites and enclaves.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1667	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Chemical composition and structural formula of zoned plagioclase from the granites and enclaves.	미상	XRF, ICP-MS	Chemical composition and structural formula of zoned plagioclase from the granites and enclaves.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1668	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Major element oxides (wt.%) and CIPW normative minerals of granites and enclaves.	미상	XRF, ICP-MS	Major element oxides (wt.%) and CIPW normative minerals of granites and enclaves.	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000
1669	BA1/7/3A/4/5B/3C/5 , BS1/5/5B/10	Rare earth element compositions of granites and enclaves (in ppm).	미상	XRF, ICP-MS	Rare earth element compositions of granites and enclaves (in ppm).	울산 방어진일대 화강암내에 산출되는 포획암의 암석학적 연구(지질학회지 Geol_v36n2p073)	35.583333 129.350000; 35.583333 129.483333; 35.466667 129.483333; 35.466667 129.350000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1670	E-5/7/12b, J-10, E-11a	Geological map of the Yonchon titanomagnetite ore deposits (Kim and Lee, 1993). 1; Quarternary basalt, 2; Quartz porphyry, 3; Biotite granite, 4; Gabbroic rock, 5; Mica schist, 6; Marble. 7; Quartzite and Quartz-sericite schist, 8; Biotite-hornblende schist, 9; Biotite gneiss, A; Massive magnetite ore body, B; Skarn type magnetite ore body, D; Layered magnetite ore body.	미상	ICP	Geological map of the Yonchon titanomagnetite ore deposits (Kim and Lee, 1993). 1; Quarternary basalt, 2; Quartz porphyry, 3; Biotite granite, 4; Gabbroic rock, 5; Mica schist, 6; Marble. 7; Quartzite and Quartz-sericite schist, 8; Biotite-hornblende schist, 9; Biotite gneiss, A; Massive magnetite ore body, B; Skarn type magnetite ore body, D; Layered magnetite ore body.	연천 함티타늄 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1671	E-5/7/12b, J-10, E-11a	Biotite granite intrude the gabbroic rock in the south east area of the Yonchon iron mine.	미상	ICP	Biotite granite intrude the gabbroic rock in the south east area of the Yonchon iron mine.	연천 함티타늄 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1672	E-5/7/12b, J-10, E-11a	Underground geologic map of the sublevel of No. 2 Adit E9 and E10 indicate sampling point for age dating and chemical analysis.	미상	ICP	Underground geologic map of the sublevel of No. 2 Adit E9 and E10 indicate sampling point for age dating and chemical analysis.	연천 함티타늄 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1673	E-5/7/12b, J-10, E-11a	Xenolith of gabbroic rock in the magnetite ore.	미상	ICP	Xenolith of gabbroic rock in the magnetite ore.	연천 함티타늄 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1674	E-5/7/12b, J-10, E-11a	Composition of pyroxenes in the system CaSiO ₃ -MgSiO ₃ -FeSiO ₃ from the Yonchon titanomagnetite ore deposits. ◇; coarse grained gabbroic rock, ○; skarn in the vicinity of or body, □; skarn in the vicinity of gabbroic rock (J-10), ★; Iron skarn (Iron Crown mine, British Columbia, Canada (Meinert, 1984), 1; clinopyroxenes from the Keodo mine (Yun, 1983), 2; clinopyroxenes from Ulsan mine (Choi, 1983), 3; clinopyroxenes from the Shinyemi mine (Yang, 1991).	미상	ICP	Composition of pyroxenes in the system CaSiO ₃ -MgSiO ₃ -FeSiO ₃ from the Yonchon titanomagnetite ore deposits. ◇; coarse grained gabbroic rock, ○; skarn in the vicinity of or body, □; skarn in the vicinity of gabbroic rock (J-10), ★; Iron skarn (Iron Crown mine, British Columbia, Canada (Meinert, 1984), 1; clinopyroxenes from the Keodo mine (Yun, 1983), 2; clinopyroxenes from Ulsan mine (Choi, 1983), 3; clinopyroxenes from the Shinyemi mine	연천 함티타늄 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1675	E-5/7/12b, J-10, E-11a	Brownish grain ilmenite (il) showing strong anisotropy in the massive iron ore.	미상	ICP	Brownish grain ilmenite (il) showing strong anisotropy in the massive iron ore.	연천 함티타늄 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1676	E-5/7/12b, J-10, E-11a	Composition of garnets from the Yonchon iron mine. Py; Pyrope, Gr; Grossular, An; Andradite, Δ ; garnet from coarse grained gabbroic rock, \square ; garnet from layered gabbroic rock, 0; garnet in limestone skarn (E-7), *; skarn garnet from ore (E-5), 0; Iron skarn (Iron Crown British Canada mine, Columbia (Meinert, 1984), \blacksquare ; garnet from the Keodo mine (Yun, 1983), 1; garnet from the Shinyemi mine (Yang, 1991), 2; garnet from the Ulsan mine (Choi, 1983).	미상	ICP	Composition of garnets from the Yonchon iron mine. Py; Pyrope, Gr; Grossular, An; Andradite, Δ ; garnet from coarse grained gabbroic rock, \square ; garnet from layered gabbroic rock, 0; garnet in limestone skarn (E-7), *; skarn garnet from ore (E-5), 0; Iron skarn (Iron Crown British Canada mine, Columbia (Meinert, 1984), \blacksquare ; garnet from the Keodo mine (Yun, 1983), 1; garnet from the Shinyemi mine (Yang, 1991), 2; garnet from the Ulsan mine (Choi, 1983).	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1677	E-5/7/12b, J-10, E-11a	Coexisted titanomagnetite (mt) and ilmenite minerals, A small amount of chalcopryite (cp) are associated with iron ore minerals.	미상	ICP	Coexisted titanomagnetite (mt) and ilmenite minerals, A small amount of chalcopryite (cp) are associated with iron ore minerals.	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1678	E-5/7/12b, J-10, E-11a	Ilmenite (il) with veinlets of hematite (hem) in the massive iron ore.	미상	ICP	Ilmenite (il) with veinlets of hematite (hem) in the massive iron ore.	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1679	E-5/7/12b, J-10, E-11a	Ball type metamorphic textures in the banded iron ore.	미상	ICP	Ball type metamorphic textures in the banded iron ore.	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1680	E-5/7/12b, J-10, E-11a	Tio2-FeO-Fe2O3 diagram for the titanomagnetite ores from the Yonchon iron mine. Δ ; ilmenite ore in the vicinity of gabbroic rock, \square ; ilmenite or in the vicinity of skarn orebody, 0; ilmenite from the layered ore, \blacktriangle ; titanomagnetite ore in the vicinity of gabbroic rock, \blacksquare ; titanomagnetite ore in the vicinity of calcic skarn, *; titanomagnetite from the layered ore body.	미상	ICP	Tio2-FeO-Fe2O3 diagram for the titanomagnetite ores from the Yonchon iron mine. Δ ; ilmenite ore in the vicinity of gabbroic rock, \square ; ilmenite or in the vicinity of skarn orebody, 0; ilmenite from the layered ore, \blacktriangle ; titanomagnetite ore in the vicinity of gabbroic rock, \blacksquare ; titanomagnetite ore in the vicinity of calcic skarn, *; titanomagnetite from the layered ore	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1681	E-5/7/12b, J-10, E-11a	TiO2-V2O5-Cr2O3 plot of magnetite and ilmenite minerals from the Yonchon iron mine. Symbols are the same as in Fig. 12.	미상	ICP	TiO2-V2O5-Cr2O3 plot of magnetite and ilmenite minerals from the Yonchon iron mine. Symbols are the same as in Fig. 12.	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1682	E-5/7/12b, J-10, E-11a	The variation of ilmenite (a) and titanomagnetite (b) minerals in terms of Cr/Cr+Al and Fe/Fe+Mg from the Yonchon iron ore deposits. Symbols are the same as in Fig.5.	미상	ICP	The variation of ilmenite (a) and titanomagnetite (b) minerals in terms of Cr/Cr+Al and Fe/Fe+Mg from the Yonchon iron ore deposits. Symbols are the same as in Fig.5.	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1683	E-5/7/12b, J-10, E-11a	δD - $\delta^{18}O$ diagram of hornblende from the Yonchon titanomagnetite ore deposits.	미상	ICP	δD - $\delta^{18}O$ diagram of hornblende from the Yonchon titanomagnetite ore deposits.	연천 함티타늬 자철광상의 성인(자원환경 지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1684	E-5/7/12b, J-10, E-11a	EPMA data of amphiboles of skarn ores from the Yonchon iron mine.	미상	ICP	EPMA data of amphiboles of skarn ores from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1685	E-5/7/12b, J-10, E-11a	Chemical composition of pyroxenes from the Yonchon iron mine.	미상	ICP	Chemical composition of pyroxenes from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1686	E-5/7/12b, J-10, E-11a	Chemical composition of garnets from the Yonchon iron mine.	미상	ICP	Chemical composition of garnets from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1687	E-5/7/12b, J-10, E-11a	EPMA data of ilmenite from the Yonchon iron mine.	미상	ICP	EPMA data of ilmenite from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1688	E-5/7/12b, J-10, E-11a	EPMA data of titanomagnetite from the Yonchon iron mine.	미상	ICP	EPMA data of titanomagnetite from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1689	E-5/7/12b, J-10, E-11a	Oxygen isotopic compositions of magnetite, quartz and granite, schist and gabbroic rocks from the Yonchon iron mine.	미상	ICP	Oxygen isotopic compositions of magnetite, quartz and granite, schist and gabbroic rocks from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1690	E-5/7/12b, J-10, E-11a	Hydrogen and oxygen isotopic compositions of hornblende minerals from the Yonchon iron mine.	미상	ICP	Hydrogen and oxygen isotopic compositions of hornblende minerals from the Yonchon iron mine.	연천 함티타늬 자철광상의 성인(자원환경지질 Econ_v27n2p117)	38.116667 127.216667; 38.116667 127.250000; 38.116667 127.250000; 38.116667 127.216667
1691	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Geological map of the Yoogoo area.	미상	XRD, EPMA	Geological map of the Yoogoo area.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1692	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Map of distribute ore zone of the Jungang adit in the Pyeongan mine	미상	XRD, EPMA	Map of distribute ore zone of the Jungang adit in the Pyeongan mine	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1693	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Simplified map showing the location of drilling sites (A) and columnar section showing the lithology and sampling horizons at DHC4 drilled hole (B) in the Daehung mine.	미상	XRD, EPMA	Simplified map showing the location of drilling sites (A) and columnar section showing the lithology and sampling horizons at DHC4 drilled hole (B) in the Daehung mine.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1694	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Talc compositions plotted in MR3-2R3-3R2 coordinates using Velde's diagram (1985). MR3; Na+K-2Ca, 2R3; Al/2, 3R2; (Mg+Fe-2+)/3, D; zone of talcs originated from dolomite, S; zone of talcs originated from serpentinite, P; zone of talcs originated from phlogopite, and H; zone of talcs originated from hornblende.	미상	XRD, EPMA	Talc compositions plotted in MR3-2R3-3R2 coordinates using Velde's diagram (1985). MR3; Na+K-2Ca, 2R3; Al/2, 3R2; (Mg+Fe-2+)/3, D; zone of talcs originated from dolomite, S; zone of talcs originated from serpentinite, P; zone of talcs originated from phlogopite, and H; zone of talcs originated from	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1695	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	X-ray diffraction patterns of representative ore samples (Ni-filtered, CuK radiation). Ta; talc, Chi; chlorite, Phi; phlogopite, and Serp; serpentine.	미상	XRD, EPMA	X-ray diffraction patterns of representative ore samples (Ni-filtered, CuK radiation). Ta; talc, Chi; chlorite, Phi; phlogopite, and Serp; serpentine.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1696	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Polarized photomicrographs of serpentines showing typical mesh texture (C4-12) (A), coexisting serpentine and tremolite (B), chlorite to talc (C), and tremolite and chlorite to talc (D). Scale bar indicates 1mm.	미상	XRD, EPMA	Polarized photomicrographs of serpentines showing typical mesh texture (C4-12) (A), coexisting serpentine and tremolite (B), chlorite to talc (C), and tremolite and chlorite to talc (D). Scale bar indicates 1mm.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1697	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Plots on Si vs. Mg/(Mg+Fe) diagram for amphiboles (after Leake, 1978). Solid square; C4-6, cross; PY-J, plus; C4-7, open square; PY-37, asterisk; C4-15, A; tremolite, B; actinolite, C; tremolitic hornblende, D; actinolitic hornblende, and E; magnesio hornblende.	미상	XRD, EPMA	Plots on Si vs. Mg/(Mg+Fe) diagram for amphiboles (after Leake, 1978). Solid square; C4-6, cross; PY-J, plus; C4-7, open square; PY-37, asterisk; C4-15, A; tremolite, B; actinolite, C; tremolitic hornblende, D; actinolitic hornblende, and E; magnesio hornblende.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1698	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Polarized photomicrographs of phlogopite to talc (A), chromite surrounded by phlogopite and phlogopite fragments in talc mass (B), tremolite to talc (C), and tremolite to chlorite to talc (D). Scale bar indicates 1 mm.	미상	XRD, EPMA	Polarized photomicrographs of phlogopite to talc (A), chromite surrounded by phlogopite and phlogopite fragments in talc mass (B), tremolite to talc (C), and tremolite to chlorite to talc (D). Scale bar indicates 1	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1699	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Plots on ZFe vs. Si for chlorite analyses after Hey (1954). I; corundophillite, II; pseudothuringite, III; sheridanite, IV; ripidollite, V; chlinoclore, VI; pychochlorite, VU; brunsvigite, VIII; pennite, IX; diabantite, and X; talc-chlorite. Solid square; C4-6 and 7, open square; C4-13, plus; C4-9, cross; C4-20, asterisk; C4-10, and solid triangle; PY-37 and PY-J.	미상	XRD, EPMA	Plots on ZFe vs. Si for chlorite analyses after Hey (1954). I; corundophillite, II; pseudothuringite, III; sheridanite, IV; ripidollite, V; chlinoclore, VI; pychochlorite, VU; brunsvigite, VIII; pennite, IX; diabantite, and X; talc-chlorite. Solid square; C4-6 and 7, open square; C4-13, plus; C4-9, cross; C4-20, asterisk; C4-10, and solid triangle; PY-37	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1700	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Plots of Al/Si vs. Mg/Si for chlorite to talc (A) (Solid square; C4-7, plus; C4-10, cross; PY-J, open square; C4-20, and asterisk; C4-13), Si vs. K for phlogopite to talc (B) (solid square; C4-14 and plus; C4-21), Al/Si vs. K/Mg for phlogopite to chlorite (C) (solid square; PY-J7 and plus; C4-9), and Al/Si vs. Ca/Mg for tremolite to chlorite (D) (solid square; C4-6 and plus; PY37-1).	미상	XRD, EPMA	Plots of Al/Si vs. Mg/Si for chlorite to talc (A) (Solid square; C4-7, plus; C4-10, cross; PY-J, open square; C4-20, and asterisk; C4-13), Si vs. K for phlogopite to talc (B) (solid square; C4-14 and plus; C4-21), Al/Si vs. K/Mg for phlogopite to chlorite (C) (solid square; PY-J7 and plus; C4-9), and Al/Si vs. Ca/Mg for tremolite to chlorite (D) (solid square; C4-6 and plus; PY37-1).	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1701	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Electron microprobe and chemical analyses and structural formulae for representative talcs.	미상	XRD, EPMA	Electron microprobe and chemical analyses and structural formulae for representative talcs.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1702	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Electron microprobe analyses and structural formulae for serpentinite, phlogopite, chlorite, amphibole, and carbonate minerals accompanying with talcs.	미상	XRD, EPMA	Electron microprobe analyses and structural formulae for serpentinite, phlogopite, chlorite, amphibole, and carbonate minerals accompanying with talcs.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1703	PY37-Ta/C, DH-Ta, YS-NC-1, YS-901/504	Chemical analyses of major and trace elements for the representative ore samples.	미상	XRD, EPMA	Chemical analyses of major and trace elements for the representative ore samples.	초염기성암 기원의 평안 및 대홍활석광상의 성인과 광물화학(자원환경지질 Econ_v27n2p131)	36.639328 126.935058; 36.639328 127.01095; 36.515206 127.01095; 36.515206 126.935058
1704	CJG-3/5/7/8/49/50/601/602	Geological map of the studied area.	미상	XRF, HPLC	Geological map of the studied area.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1705	CJG-3/5/7/8/49/50/601/602	Photomicrographs of quartz-feldspar schist Quartz and microcline shows polygonal texture.	미상	XRF, HPLC	Photomicrographs of quartz-feldspar schist Quartz and microcline shows polygonal texture.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1706	CJG-3/5/7/8/49/50/601/602	Triangular diagrams of modal quartz (Q)-alkali fel- dspar (K)-plagioclase (P) for the alkali granitic rocks (Streckeisen, 1976). 1; Alkali feldspar granite, 2; Quartz alkali feldspar granite, 3; Alkali feldspar syenite, 4; Quartz syenite.	미상	XRF, HPLC	Triangular diagrams of modal quartz (Q)-alkali fel- dspar (K)-plagioclase (P) for the alkali granitic rocks (Streckeisen, 1976). 1; Alkali feldspar granite, 2; Quartz alkali feldspar granite, 3; Alkali feldspar syenite, 4; Quartz syenite.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1707	CJG-3/5/7/8/49/50/601/602	Photomicrographs of REE minerals. A; Zircon-REE type, it is characterized by veiy fine-grained zircon (zr) aggregates, which replace lo biotite(bt), allanite (an) and magnetite (mt). High relief monazite (mz), euxenite (en) and fergusonite (fc) associated with the zircon. B; Allanite-REE type, allanite commonly appear as coarse euhedal to subhedral crystals and show strong pleochroism. C; K-feldspar-REE type, allanite and fergusonite associated with the sphene (sp) and zircon which are often showing romb-shaped forms. Microcline (me) twinning appears as a double set of polysynthetic twin laminae. D; Fluorite-REE type, allanite and fine-grained zircon associated with the fluorite (fr). Hydrothermally formed allanite crystals are commonly anhedra and show strong paleochroism.	미상	XRF, HPLC	Photomicrographs of REE minerals. A; Zircon-REE type, it is characterized by veiy fine-grained zircon (zr) aggregates, which replace lo biotite(bt), allanite (an) and magnetite (mt). High relief monazite (mz), euxenite (en) and fergusonite (fc) associated with the zircon. B; Allanite-REE type, allanite commonly appear as coarse euhedal to subhedral crystals and show strong pleochroism. C; K-feldspar-REE type, allanite and fergusonite associated with the sphene (sp) and zircon which are often showing romb-shaped forms. Microcline (me) twinning appears as a double set of polysynthetic twin laminae. D; Fluorite-REE type, allanite and fine-grained zircon associated with the fluorite (fr). Hydrothermally formed allanite crystals are commonly anhedra and show strong	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1708	CJG-3/5/7/8/49/50/601/602	Zr/TiO ₂ -Nb/Y diagram showing the distribution of schistose rocks from Kyemyeongsan Formation. Field boundaries from Winchester and Floyd (1977). Open triangle; quartz schist, solid triangle; quartz-mica schist, open circle; quartz-feldspar schist	미상	XRF, HPLC	Zr/TiO ₂ -Nb/Y diagram showing the distribution of schistose rocks from Kyemyeongsan Formation. Field boundaries from Winchester and Floyd (1977). Open triangle; quartz schist, solid triangle; quartz-mica schist, open circle; quartz-feldspar schist	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1709	CJG-3/5/7/8/49/50/601/602	(Na ₂ O + K ₂ O)/Al ₂ O ₃ -Zr-Y diagrams showing the extent of alkalic trends (highly increasing Y and Zr content with differentiation. Quartz schist; open triangles, quartz-mica schist; solid triangles, quartz-feldspar schist; open circle, REE ores (K-feldspar-REE ore; solid circles, Zircon-REE ore; solid square).	미상	XRF, HPLC	(Na ₂ O + K ₂ O)/Al ₂ O ₃ -Zr-Y diagrams showing the extent of alkalic trends (highly increasing Y and Zr content with differentiation. Quartz schist; open triangles, quartz-mica schist; solid triangles, quartz-feldspar schist; open circle, REE ores (K-feldspar-REE ore; solid circles, Zircon-REE ore; solid square).	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1710	CJG-3/5/7/8/49/50/601/602	Zr-Y diagrams for schistose rocks and REE ores from Kyemyeongsan Formation. See text for comments. Symbols are the same as those of Fig. 7.	미상	XRF, HPLC	Zr-Y diagrams for schistose rocks and REE ores from Kyemyeongsan Formation. See text for comments. Symbols are the same as those of Fig.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1711	CJG-3/5/7/8/49/50/601/602	Chondrite-normalized REE patterns for schistose rocks of Kyemyeongsan Formation from the Chungju district Chondrite values from Boynton (1984). Open triangles; quartz schist, solid triangles; quartz-mica schist, open circle; quartz-feldspar schist	미상	XRF, HPLC	Chondrite-normalized REE patterns for schistose rocks of Kyemyeongsan Formation from the Chungju district Chondrite values from Boynton (1984). Open triangles; quartz schist, solid triangles; quartz-mica schist, open circle; quartz-feldspar schist	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1712	CJG-3/5/7/8/49/50/601/602	Chondrite-normalized REE patterns for REE ore types from the Kyemyeongsan Formation. Solid squares; Zircon-REE type, open squares; Allanite-REE type, solid circles; Feldspar-REE type.	미상	XRF, HPLC	Chondrite-normalized REE patterns for REE ore types from the Kyemyeongsan Formation. Solid squares; Zircon-REE type, open squares; Allanite-REE type, solid circles; Feldspar-REE type.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1713	CJG-3/5/7/8/49/50/601/602	Sm-Nd isochron diagram for the REE ores from the Chungju district	미상	XRF, HPLC	Sm-Nd isochron diagram for the REE ores from the Chungju district	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1714	CJG-3/5/7/8/49/50/601/602	Modal composition of the alkali granite occur Kyemyeongsan Formation of Chungju district (in volume%).	미상	XRF, HPLC	Modal composition of the alkali granite occur Kyemyeongsan Formation of Chungju district (in volume%).	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1715	CJG-3/5/7/8/49/50/601/602	Mineral associations of REE ore and RE ore types from the Kyemyeongsan Formation.	미상	XRF, HPLC	Mineral associations of REE ore and RE ore types from the Kyemyeongsan Formation.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1716	CJG-3/5/7/8/49/50/601/602	Selected chemical analyses from the Kyemyeongsan Formation.	미상	XRF, HPLC	Selected chemical analyses from the Kyemyeongsan Formation.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1717	CJG-3/5/7/8/49/50/601/602	Selected chemical analyses for the REE ores of Chungju district	미상	XRF, HPLC	Selected chemical analyses for the REE ores of Chungju district	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1718	CJG-3/5/7/8/49/50/601/602	Sm-Nd isotope data from the REE-rich ore samples.	미상	XRF, HPLC	Sm-Nd isotope data from the REE-rich ore samples.	충주지역 희토류 광상의 성인: 산출상태와 지화학적 특성(자원환경지질 Econ_v28n6p599)	37.117775 127.732761; 37.117775 128.044647; 36.848567 128.044647; 36.848567 127.732761
1719	Janggun	Microphotographs of skarn minerals from magnetite deposits of the Janggun mine. A; Sub-radial type chondrodite coexisting manetite. B; Twinning type chondrodite contact with magnetite, C; Magnesite replaced by olivine, clinopyroxene and amphibole assemblages, D; Apatite inclusion in chlorite, ch; chondrodite, mt; magnetite, cpx; clinopyroxene, mg; magnesite, am; amphibole, ol; olivine, ch; chlorite, ap; apatite.	미상	XRD	Microphotographs of skarn minerals from magnetite deposits of the Janggun mine. A; Sub-radial type chondrodite coexisting manetite. B; Twinning type chondrodite contact with magnetite, C; Magnesite replaced by olivine, clinopyroxene and amphibole assemblages, D; Apatite inclusion in chlorite, ch; chondrodite, mt; magnetite, cpx; clinopyroxene, mg; magnesite, am; amphibole, ol; olivine, ch; chlorite, ap;	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1720	Janggun	Paragenetic sequence of skarn and ore minerals in skarn stage from magnetite deposits of the Janggun mine.	미상	XRD	Paragenetic sequence of skarn and ore minerals in skarn stage from magnetite deposits of the Janggun mine.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1721	Janggun	Plotted diagram showing mole fraction of FeO versus MgO for chondrodite from magnetite deposits of the Janggun mine. Wondong; composition of chondrodite from the Wondong mine (Kim et al., 1988), Shinyemi; composition of chondrodite from the Shinyemi mine (Yang, 1991), Janggun 1; composition of twinning-type radial-type chondrodite.	미상	XRD	Plotted diagram showing mole fraction of FeO versus MgO for chondrodite from magnetite deposits of the Janggun mine. Wondong; composition of chondrodite from the Wondong mine (Kim et al., 1988), Shinyemi; composition of chondrodite from the Shinyemi mine (Yang, 1991), Janggun 1; composition of twinning-type radial-type chondrodite.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1722	Janggun	Diagram of temperature and mole fraction of CO2 showing the possible ranges at dotted area suggested by mineral assemblages and thermodynamic considerations from skarn minerals in magnetite deposits of the Janggun mine. The curves of MgO-SiO2-H2O-CO2 and MgO-CaO-SiO2-H2O-CO2 systems are modified from Harris, Einaudi (1982). pe; periclase, br; brucite, mn; magnesite, fo; forsterite, di; diopside, ta; talc, se; serpentine, tr; tremolite, qu; quartz, cc; calcite.	미상	XRD	Diagram of temperature and mole fraction of CO2 showing the possible ranges at dotted area suggested by mineral assemblages and thermodynamic considerations from skarn minerals in magnetite deposits of the Janggun mine. The curves of MgO-SiO2-H2O-CO2 and MgO-CaO-SiO2-H2O-CO2 systems are modified from Harris, Einaudi (1982). pe; periclase, br; brucite, mn; magnesite, fo; forsterite, di; diopside, ta; talc, se; serpentine, tr; tremolite, qu; quartz, cc; calcite.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1723	Janggun	X-ray powder diffraction data of chondrodite from magnetite deposits of the Janggun mine.	미상	XRD	X-ray powder diffraction data of chondrodite from magnetite deposits of the Janggun mine.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1724	Janggun	X-ray powder diffraction data of magnesite from magnetite deposits of the Janggun mine.	미상	XRD	X-ray powder diffraction data of magnesite from magnetite deposits of the Janggun mine.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1725	Janggun	Chemical composition of chondrodite from magnetite deposits of the Janggun mine.	미상	XRD	Chemical composition of chondrodite from magnetite deposits of the Janggun mine.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1726	Janggun	Chemical composition of olivine, chlonte and serpentine from magnetite depostits of the Janggun mine.	미상	XRD	Chemical composition of olivine, chlonte and serpentine from magnetite depostits of the Janggun mine.	장군광산의 자철석광상에서 산출되는 Mg-스카른광물(자원환경지질 Econ_v29n1p011)	36.857361 129.063611
1727	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Geologic map of the Gyeongsang province and the distribution of iron archaeological sites and ore deposits (map revised from KIGAM, 2023).	미상	EPMA, XRF, ICP-MS	Geologic map of the Gyeongsang province and the distribution of iron archaeological sites and ore deposits (map revised from KIGAM, 2023).	경상지역 제철유적의 산지추정 연구: 암 석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 34.708889 129.591667; 34.708889 128.103056
1728	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Backscattered electron images of representative iron artifacts excavated in the Gyeongsang province. (A) Iron bloom. (B) Pig iron slag. (C) Arrowhead. (D) Iron flake. (E) Iron ore. (F) Iron bloom slag. (G) Pig iron. (H) Pig iron slag. (I) Iron bloom slag. (J) Pig iron slag. (K) Iron bloom. (L) Iron bloom slag. (M, N) Forging iron flake. (O) Smithery iron. Samples from (A, B) Kimhae Hagaeri. (C, D) Kimhae Daeseongdong. (E, F) Milyang Sacheonri. (G, H) Milyang Geumgokri. (I) Busan Jisadong. (J) Ulsan Gumiri. (K-O) Gyeongju Nodong-12. Abbreviation: Wu=wüstite, Ol=olivine, Px=pyroxene, Qtz=quartz, Mt=magnetite, Ttn=titanite.	미상	EPMA, XRF, ICP-MS	Backscattered electron images of representative iron artifacts excavated in the Gyeongsang province. (A) Iron bloom. (B) Pig iron slag. (C) Arrowhead. (D) Iron flake. (E) Iron ore. (F) Iron bloom slag. (G) Pig iron. (H) Pig iron slag. (I) Iron bloom slag. (J) Pig iron slag. (K) Iron bloom. (L) Iron bloom slag. (M, N) Forging iron flake. (O) Smithery iron. Samples from (A, B) Kimhae Hagaeri. (C, D) Kimhae Daeseongdong. (E, F) Milyang Sacheonri. (G, H) Milyang Geumgokri. (I) Busan Jisadong. (J) Ulsan Gumiri. (K-O) Gyeongju Nodong-12. Abbreviation: Wu=wüstite, Ol=olivine, Px=pyroxene, Qtz=quartz,	경상지역 제철유적의 산지추정 연구: 암 석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1729	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Microphotographs under cross-polarized light for thin sections of iron ores sourced from the ore deposits in the Gyeongsang province. Each inset represents a reflected light image for the ore sections. (A) Dalcheon. (B) Mulgeum. (C) Maeri. (D) Daedong. (E) Milyang-28. (F) Haman. Abbreviation: Ep=epidote, Cc=calcite, Amp=amphibole, Chl=chlorite, Pmp=pumpellyite, Gt=garnet, Py=pyrite, Sph=sphalerite, Cpy=chalcopryite. Refer to Fig. 3 for others.	미상	EPMA, XRF, ICP-MS	Microphotographs under cross-polarized light for thin sections of iron ores sourced from the ore deposits in the Gyeongsang province. Each inset represents a reflected light image for the ore sections. (A) Dalcheon. (B) Mulgeum. (C) Maeri. (D) Daedong. (E) Milyang-28. (F) Haman. Abbreviation: Ep=epidote, Cc=calcite, Amp=amphibole, Chl=chlorite, Pmp=pumpellyite, Gt=garnet, Py=pyrite, Sph=sphalerite, Cpy=chalcopryite. Refer	경상지역 제철유적의 산지추정 연구: 암 석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1730	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Backscattered electron images and energy dispersive X-ray spectroscopy mapping analyses for samples from the iron archaeological sites and the ore deposits. (A) Dalcheon deposit. (B) Daedong deposit. (C) Haman deposit. (D) Iron bloom slag from Kimhae Hagaeri. (E) Pig iron slag from Milyang Geumgokri. (F) Iron bloom slag from Milyang Sacheonri. Abbreviation: Adr=andradite, Gra=Grossular. Refer to Fig. 3 for others.	미상	EPMA, XRF, ICP-MS	Backscattered electron images and energy dispersive X-ray spectroscopy mapping analyses for samples from the iron archaeological sites and the ore deposits. (A) Dalcheon deposit. (B) Daedong deposit. (C) Haman deposit. (D) Iron bloom slag from Kimhae Hagaeri. (E) Pig iron slag from Milyang Geumgokri. (F) Iron bloom slag from Milyang Sacheonri. Abbreviation: Adr=andradite, Gra=Grossular. Refer to	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1731	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Haker variation diagrams of (A, B) Fe ₂ O ₃ T. (C, D) Al ₂ O ₃ . (E, F) CaO against SiO ₂ content for samples of iron artifacts (A, C, E) and iron ores (B, D, F).	미상	EPMA, XRF, ICP-MS	Haker variation diagrams of (A, B) Fe ₂ O ₃ T. (C, D) Al ₂ O ₃ . (E, F) CaO against SiO ₂ content for samples of iron artifacts (A, C, E) and iron ores (B, D, F).	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1732	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Rare earth elements (REE) variations of chondrite-normalized samples from the iron archaeological sites and the ore deposits. (A) Kimhae Hagyeri and Daeseongdong. (B) Milyang Sachonri and Geumgokri. (C) Busan Jisadong. (D) Ulsan Gumiri. (E) Gyeongju Nodong-12. (F) Ore deposits.	미상	EPMA, XRF, ICP-MS	Rare earth elements (REE) variations of chondrite-normalized samples from the iron archaeological sites and the ore deposits. (A) Kimhae Hagyeri and Daeseongdong. (B) Milyang Sachonri and Geumgokri. (C) Busan Jisadong. (D) Ulsan Gumiri. (E) Gyeongju Nodong-12. (F) Ore deposits.	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1733	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Spider diagrams of trace element concentrations for samples from the iron archaeological sites and the ore deposits. (A) Kimhae Hagyeri and Daeseongdong. (B) Milyang Sachonri and Geumgokri. (C) Busan Jisadong. (D) Ulsan Gumiri. (E) Gyeongju Nodong; 12. (F) Ore deposits.	미상	EPMA, XRF, ICP-MS	Spider diagrams of trace element concentrations for samples from the iron archaeological sites and the ore deposits. (A) Kimhae Hagyeri and Daeseongdong. (B) Milyang Sachonri and Geumgokri. (C) Busan Jisadong. (D) Ulsan Gumiri. (E) Gyeongju Nodong; 12.	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1734	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	A comparison of Ni/Cr ratios and Ti+V concentrations for iron ore samples from the iron archaeological sites and the ore deposits.	미상	EPMA, XRF, ICP-MS	A comparison of Ni/Cr ratios and Ti+V concentrations for iron ore samples from the iron archaeological sites and the ore deposits.	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1735	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Strontium isotope ratios of samples from the iron archaeological sites and the ore deposits.	미상	EPMA, XRF, ICP-MS	Strontium isotope ratios of samples from the iron archaeological sites and the ore deposits.	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1736	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Lead isotope ratios of samples from the iron archaeological sites and the ore deposits.	미상	EPMA, XRF, ICP-MS	Lead isotope ratios of samples from the iron archaeological sites and the ore deposits.	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1737	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Lead and strontium isotope ratios of samples from the iron archaeological sites and the ore deposits.	미상	EPMA, XRF, ICP-MS	Lead and strontium isotope ratios of samples from the iron archaeological sites and the ore deposits.	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1738	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	General characteristics of the studied iron archaeological sites in the Gyeongsang province	미상	EPMA, XRF, ICP-MS	General characteristics of the studied iron archaeological sites in the Gyeongsang province	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1739	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	General characteristics of the studied ore deposits in the Gyeongsang province	미상	EPMA, XRF, ICP-MS	General characteristics of the studied ore deposits in the Gyeongsang province	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1740	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Mineral assemblages of samples from the iron archaeological sites and the ore deposits	미상	EPMA, XRF, ICP-MS	Mineral assemblages of samples from the iron archaeological sites and the ore deposits	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1741	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Chemical compositions of magnetites from the iron archaeological sites and the ore deposits (wt.%)	미상	EPMA, XRF, ICP-MS	Chemical compositions of magnetites from the iron archaeological sites and the ore deposits (wt.%)	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1742	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Major element concentrations of samples from the iron archaeological sites and the ore deposits (wt.%)	미상	EPMA, XRF, ICP-MS	Major element concentrations of samples from the iron archaeological sites and the ore deposits (wt.%)	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1743	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Trace element concentrations of samples from the iron archaeological sites and the ore deposits	미상	EPMA, XRF, ICP-MS	Trace element concentrations of samples from the iron archaeological sites and the ore deposits	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1744	Dalcheon, Mulgeum, Maeri, Daedong, Milyang-28, Haman	Lead and strontium isotope ratios of samples from the iron archaeological sites and the ore deposits	미상	EPMA, XRF, ICP-MS	Lead and strontium isotope ratios of samples from the iron archaeological sites and the ore deposits	경상지역 제철유적의 산지추정 연구: 암석기재학 및 지화학적 접근(자원환경지질 Econ_v56n4p475)	36.096111 128.103056; 36.096111 129.591667; 34.708889 129.591667; 34.708889 128.103056
1745	J8/18-3/3-1/18-2-1~3	Geological map of the Ssangjeon deposit area(from KORES, 2011) with simplified geologic map of Korea (right side) showing the tectonic province and location of the Ssangjeon deposit.	미상	가열냉각실험	Geological map of the Ssangjeon deposit area(from KORES, 2011) with simplified geologic map of Korea (right side) showing the tectonic province and location of the Ssangjeon deposit.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1746	J8/18-3/3-1/18-2-1~3	Mineral paragenesis of the Ssangjeon deposit.	미상	가열냉각실험	Mineral paragenesis of the Ssangjeon deposit.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1747	J8/18-3/3-1/18-2-1~3	Photomicrographs of the mineral occurrence and assemblages at the Ssangjeon deposit. Abbreviations: asp=arsenopyrite, bn=bismuthinite, cp=chalcopyrite, gd=glauco-dot, im=ilmenite, mar=marcasite, nb=native bismuth, po=pyrrhotite, py=pyrite, qtz=quartz, sch=scheelite, sl=sphalerite, tt=titanite, wf=wolframite.	미상	가열냉각실험	Photomicrographs of the mineral occurrence and assemblages at the Ssangjeon deposit. Abbreviations: asp=arsenopyrite, bn=bismuthinite, cp=chalcopyrite, gd=glauco-dot, im=ilmenite, mar=marcasite, nb=native bismuth, po=pyrrhotite, py=pyrite, qtz=quartz, sch=scheelite, sl=sphalerite, tt=titanite, wf=wolframite.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1748	J8/18-3/3-1/18-2-1~3	Photomicrographs of type I(liquid-rich fluid inclusions: A), type II(vapor-rich fluid inclusions: B), type IVa(CO ₂ -bearing fluid inclusions: D) and type IVb(CO ₂ -bearing fluid inclusions: C) fluid inclusions in vein quartz, Ssangjeon deposit. Abbreviations: V=vapor phase, L=liquid phase, aq=aqueous.	미상	가열냉각실험	Photomicrographs of type I(liquid-rich fluid inclusions: A), type II(vapor-rich fluid inclusions: B), type IVa(CO ₂ -bearing fluid inclusions: D) and type IVb(CO ₂ -bearing fluid inclusions: C) fluid inclusions in vein quartz, Ssangjeon deposit. Abbreviations: V=vapor phase, L=liquid phase, aq=aqueous.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1749	J8/18-3/3-1/18-2-1~3	Histogram of homogenization temperatures(Th) of primary fluid inclusions in vein quartz of the Ssangjeon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II inclusion, Type IVa=type IVa fluid inclusion (homogenized by CO ₂ -liquid), Type IVb=type IVb fluid inclusion (homogenized by aqueous liquid).	미상	가열냉각실험	Histogram of homogenization temperatures(Th) of primary fluid inclusions in vein quartz of the Ssangjeon deposit. Abbreviations: Type I=type I fluid inclusion, Type II=type II inclusion, Type IVa=type IVa fluid inclusion (homogenized by CO ₂ -liquid), Type IVb=type IVb fluid inclusion (homogenized by aqueous liquid).	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1750	J8/18-3/3-1/18-2-1~3	Histogram of salinities of primary fluid inclusions in vein quartz of the Ssangjeon deposit. Abbreviations are same as Figure 6.	미상	가열냉각실험	Histogram of salinities of primary fluid inclusions in vein quartz of the Ssangjeon deposit. Abbreviations are same as Figure 6.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1751	J8/18-3/3-1/18-2-1~3	Homogenization temperature versus salinity diagram for primary type I, II, IVa and IVb fluid inclusions in vein quartz of the Ssangjeon deposit.	미상	가열냉각실험	Homogenization temperature versus salinity diagram for primary type I, II, IVa and IVb fluid inclusions in vein quartz of the Ssangjeon deposit.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1752	J8/18-3/3-1/18-2-1~3	Pseudo-binary condensed T-XAs section of the Fe-As-S system (Kretschmar and Scott, 1976). Filled triangles and inverted triangles indicate As contents in arsenopyrite, Ssangjeon deposit. Black bold line demonstrates As contents in arsenopyrite(with pyrrhotite and/or pyrite) in Ssangjeon W-bearing deposit. Abbreviations: asp=arsenopyrite, Lo=loellingite, po=pyrrhotite, py=pyrite.	미상	가열냉각실험	Pseudo-binary condensed T-XAs section of the Fe-As-S system (Kretschmar and Scott, 1976). Filled triangles and inverted triangles indicate As contents in arsenopyrite, Ssangjeon deposit. Black bold line demonstrates As contents in arsenopyrite(with pyrrhotite and/or pyrite) in Ssangjeon W-bearing deposit. Abbreviations: asp=arsenopyrite, Lo=loellingite, po=pyrrhotite, py=pyrite.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1753	J8/18-3/3-1/18-2-1~3	Fugacity of Sulfur versus temperature diagram for stage I of the Ssangjeon W-bearing deposit showing the possible sulfur fugacity and temperature ranges with sulfidation reactions. Abbreviations: asp=arsenopyrite, Bi=native bismuth, bn=bismuthinite, hm=hematite, mt=magnetite, po=pyrrhotite, py=pyrite.	미상	가열냉각실험	Fugacity of Sulfur versus temperature diagram for stage I of the Ssangjeon W-bearing deposit showing the possible sulfur fugacity and temperature ranges with sulfidation reactions. Abbreviations: asp=arsenopyrite, Bi=native bismuth, bn=bismuthinite, hm=hematite, mt=magnetite, po=pyrrhotite, py=pyrite.	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1754	J8/18-3/3-1/18-2-1~3	Chemical composition of arsenopyrite from the Ssangjeon W deposit	미상	가열냉각실험	Chemical composition of arsenopyrite from the Ssangjeon W deposit	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778
1755	J8/18-3/3-1/18-2-1~3	Chemical composition of sphalerite from the Ssangjeon W deposit	미상	가열냉각실험	Chemical composition of sphalerite from the Ssangjeon W deposit	쌍전 함 텅스텐 열수 맥상광상의 생성환경(자원환경지질 Econ_v55n6p689)	36.972942 129.145778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1756	NJ, GH, IG, BD	Geological map of northeastern part of the Korean Peninsula (A) with exaggerated maps (B and C), showing sampling locations in this study (captured from https://mgeo.kigam.re.kr/map/main.do?process=geology_50k). Abbreviations: oj; Jeongseon Limestone, yh; Youngheung Formation, omg; Magdong Formation, and osb; Seokbyungsan Formation. Sampling locations: NP; Nampyeong-ri, GH; Gwangha-ri, YT; Yongtan-ri, IG; Imgok-ri, and BD; Bukdong-ri sites.	미상	EPMA. XRD	Geological map of northeastern part of the Korean Peninsula (A) with exaggerated maps (B and C), showing sampling locations in this study (captured from https://mgeo.kigam.re.kr/map/main.do?process=geology_50k). Abbreviations: oj; Jeongseon Limestone, yh; Youngheung Formation, omg; Magdong Formation, and osb; Seokbyungsan Formation. Sampling locations: NP; Nampyeong-ri, GH; Gwangha-ri, YT; Yongtan-ri, IG;	태백산분지 내 새로운 행매층 분포 확인 (자원환경지질 Econ_v54n3p365)	37.588628 128.909817; 37.588628 128.991406; 37.503278 128.991406; 37.503278 128.909817 37.460222 128.608544; 37.460222 128.728369; 37.362389 128.728369; 37.362389 128.608544
1757	NJ, GH, IG, BD	Polarized microscopic images under crossed polarized light (XPL)(A and D) and plane polarized light (PPL)(E) modes after alizarin red S staining, and BSE images (B, C, and F) of a carbonate rocks from the Imgok-ri (IG) and Bukdong-ri (BD) sites. The carbonate rocks are mainly composed of dolomite aggregate (A), single crystalline dolomite and quartz (D and E). Phengite occurs in both of dolomite aggregate (B and C) and matrix (F), and calcite is existed in matrix as filling materials (B and F). Abbreviations: dol; dolomite, cal; calcite, phen; phengite, and qtz; quartz.	미상	EPMA. XRD	Polarized microscopic images under crossed polarized light (XPL)(A and D) and plane polarized light (PPL)(E) modes after alizarin red S staining, and BSE images (B, C, and F) of a carbonate rocks from the Imgok-ri (IG) and Bukdong-ri (BD) sites. The carbonate rocks are mainly composed of dolomite aggregate (A), single crystalline dolomite and quartz (D and E). Phengite occurs in both of dolomite aggregate (B and C) and matrix (F), and calcite is existed in matrix as filling materials (B and F). Abbreviations: dol; dolomite, cal; calcite, phen; phengite, and qtz; quartz.	태백산분지 내 새로운 행매층 분포 확인 (자원환경지질 Econ_v54n3p365)	37.588628 128.909817; 37.588628 128.991406; 37.503278 128.991406; 37.503278 128.909817 37.460222 128.608544; 37.460222 128.728369; 37.362389 128.728369; 37.362389 128.608544
1758	NJ, GH, IG, BD	Bulk X-ray diffraction patterns of some carbonate rocks collected from the study area. Abbreviations: Do; dolomite, Qz; quartz, Cc; calcite, Ph; phengite, and Kf; K-feldspar.	미상	EPMA. XRD	Bulk X-ray diffraction patterns of some carbonate rocks collected from the study area. Abbreviations: Do; dolomite, Qz; quartz, Cc; calcite, Ph; phengite, and Kf; K-feldspar.	태백산분지 내 새로운 행매층 분포 확인 (자원환경지질 Econ_v54n3p365)	37.588628 128.909817; 37.588628 128.991406; 37.503278 128.991406; 37.503278 128.909817 37.460222 128.608544; 37.460222 128.728369; 37.362389 128.728369; 37.362389 128.608544
1759	NJ, GH, IG, BD	Representative electron probe micro analyzer (EPMA) results and the structural formulae of the phengites from the Jeongseon and Okgye area	미상	EPMA. XRD	Representative electron probe micro analyzer (EPMA) results and the structural formulae of the phengites from the Jeongseon and Okgye area	태백산분지 내 새로운 행매층 분포 확인 (자원환경지질 Econ_v54n3p365)	37.588628 128.909817; 37.588628 128.991406; 37.503278 128.991406; 37.503278 128.909817 37.460222 128.608544; 37.460222 128.728369; 37.362389 128.728369; 37.362389 128.608544

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1760	HJ-1/2, SE02	Bird's-eye view and general geology of Hyeongjeseom, Jeju Island. Abbreviations: Vd-volcaniclastic deposit; Ag & Sc- agglomerate (lava spatters & bombs) & scoria deposit ; Lp-ponded Lava; Lf-lava flow; Rd-reworked deposit; Bd-beach deposit.	미상	Ar-Ar	Bird's-eye view and general geology of Hyeongjeseom, Jeju Island. Abbreviations: Vd-volcaniclastic deposit; Ag & Sc- agglomerate (lava spatters & bombs) & scoria deposit ; Lp-ponded Lava; Lf-lava flow; Rd-reworked deposit; Bd-beach deposit.	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1761	HJ-1/2, SE02	Field photographs of agglomerate, Hyeongjeseom, Jeju Island. (a) lava spatters & bombs overlying the slanted volcaniclastic deposit, (b) quenched and fragmented lava spatters & bombs, (c) quenched and fragmented scoria, (d) agglutinated volcanic bombs and lava spatters.	미상	Ar-Ar	Field photographs of agglomerate, Hyeongjeseom, Jeju Island. (a) lava spatters & bombs overlying the slanted volcaniclastic deposit, (b) quenched and fragmented lava spatters & bombs, (c) quenched and fragmented scoria, (d) agglutinated volcanic bombs and lava spatters.	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1762	HJ-1/2, SE02	Field photographs of ponded lava, Hyeongjeseom, Jeju Island. (a, b) columnar jointed lava covered by agglomerate, (c) lava intrudes into agglomerate, (d) massive portion of ponded lava.	미상	Ar-Ar	Field photographs of ponded lava, Hyeongjeseom, Jeju Island. (a, b) columnar jointed lava covered by agglomerate, (c) lava intrudes into agglomerate, (d) massive portion of ponded lava.	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1763	HJ-1/2, SE02	Photomicrographs of (a)(b) volcanic bomb(# HJ-01), (c)(d) ponded lava(#HJ-02). (a, c; under cross-polarized light view; b, d; under plane-polarized light view; scale bar 0.5 mm).	미상	Ar-Ar	Photomicrographs of (a)(b) volcanic bomb(# HJ-01), (c)(d) ponded lava(#HJ-02). (a, c; under cross-polarized light view; b, d; under plane-polarized light view; scale bar 0.5 mm).	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1764	HJ-1/2, SE02	Field photographs of lava flows, Hyeongjeseom, Jeju Island. (a, b) aa lava flows, (c) very viscous flow surface, (d) ultramafic mantle xenolith clot (yellow arrow; much smaller than coin).	미상	Ar-Ar	Field photographs of lava flows, Hyeongjeseom, Jeju Island. (a, b) aa lava flows, (c) very viscous flow surface, (d) ultramafic mantle xenolith clot (yellow arrow; much smaller than coin).	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1765	HJ-1/2, SE02	Field photographs of scoria deposit and reworked deposit, Hyeongjeseom, Jeju Island. The view covered by each image is shown in the inset. (a) black scoria overlying volcaniclastic deposit, (b) relationship between scoria deposit and reworked deposit, (c) re-deposited scoria bottom of the slope, (d) unsorted reworked deposit overlying re-deposited scoria.	미상	Ar-Ar	Field photographs of scoria deposit and reworked deposit, Hyeongjeseom, Jeju Island. The view covered by each image is shown in the inset. (a) black scoria overlying volcaniclastic deposit, (b) relationship between scoria deposit and reworked deposit, (c) re-deposited scoria bottom of the slope, (d) unsorted reworked deposit overlying re-deposited scoria.	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1766	HJ-1/2, SE02	(Na ₂ O+K ₂ O)(wt%) vs. SiO ₂ (wt%) plot of the volcanic rocks from Hyeongjeseom, Jeju Island. The fields show rock nomenclature schemes of Le Maitre et al. (2002) with thick solid line from Macdonald and Katura (1964), dividing alkalic rocks from sub-alkalic rocks. Recalculated to 100% on anhydrous basis with Fe ₂ O ₃ /FeO ratio, 0.4 (Middlemost, 1989) prior to plotting. Abbreviations: ThB-tholeiitic basalt, AB-alkali basalt; TB- trachybasalt; BTA-basaltic trachyandesite; TA-trachyandesite. Symbol: open circle from Hyeongjeseom and closed square from Songaksan (unpublished data).	미상	Ar-Ar	(Na ₂ O+K ₂ O)(wt%) vs. SiO ₂ (wt%) plot of the volcanic rocks from Hyeongjeseom, Jeju Island. The fields show rock nomenclature schemes of Le Maitre et al. (2002) with thick solid line from Macdonald and Katura (1964), dividing alkalic rocks from sub-alkalic rocks. Recalculated to 100% on anhydrous basis with Fe ₂ O ₃ /FeO ratio, 0.4 (Middlemost, 1989) prior to plotting. Abbreviations: ThB-tholeiitic basalt, AB-alkali basalt; TB- trachybasalt; BTA-basaltic trachyandesite; TA-trachyandesite. Symbol: open circle from Hyeongjeseom and closed square from	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1767	HJ-1/2, SE02	Ar-Ar plateau ages of the whole rock (groundmass) samples from Hyeongjeseom, Jeju Island.	미상	Ar-Ar	Ar-Ar plateau ages of the whole rock (groundmass) samples from Hyeongjeseom, Jeju Island.	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1768	HJ-1/2, SE02	Post-glacial sea level rise. (Credit: Robert A. Rohde from Wikimedia Commons is licensed under CC BY-SA 3.0). The red line indicates absolute age of volcanic rock in Hyeongjeseom, Jeju Island.	미상	Ar-Ar	Post-glacial sea level rise. (Credit: Robert A. Rohde from Wikimedia Commons is licensed under CC BY-SA 3.0). The red line indicates absolute age of volcanic rock in Hyeongjeseom, Jeju Island.	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1769	HJ-1/2, SE02	(a) bathymetry map (numbers in meter indicate depth from the sea surface; data captured from http://www.khoa.go.kr/oceanmap/main.do#) and (b) aerial orthophotography of Hyeongjeseom (dotted circle represents inferred location of crater with approximate 600 m diameter).	미상	Ar-Ar	(a) bathymetry map (numbers in meter indicate depth from the sea surface; data captured from http://www.khoa.go.kr/oceanmap/main.do#) and (b) aerial orthophotography of Hyeongjeseom (dotted circle represents inferred location of crater with approximate 600 m diameter).	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1770	HJ-1/2, SE02	Major (wt%) element abundances of volcanic rocks from Hyeongjaeseom, Jeju Island	미상	Ar-Ar	Major (wt%) element abundances of volcanic rocks from Hyeongjaeseom, Jeju Island	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1771	HJ-1/2, SE02	Result of Ar-Ar age dating of volcanic rocks from Hyeongjaeseom, Jeju Island	미상	Ar-Ar	Result of Ar-Ar age dating of volcanic rocks from Hyeongjaeseom, Jeju Island	제주도 형제섬 화산체의 지질과 화산활동 (자원환경지질 Econ_v54n2p187)	33.209167 126.314397
1772	Proximal/Medial	(a) Location map; (b) Geological map of the Ulleung Island; (c) Geological map around the Jugam scoria cone, modified from Hwang et al. (2012).	미상	현미경관찰	(a) Location map; (b) Geological map of the Ulleung Island; (c) Geological map around the Jugam scoria cone, modified from Hwang et al. (2012).	울릉도 죽암분석층에서 나온 화성쇄설물들의 조직과 분화유형(자원환경지질 Econ_v52n5p459)	37.549811 130.893642; 37.549811 130.916000; 37.531500 130.916000; 37.531500 130.893642

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1773	Proximal/Medial	Photomicrographs that show typical vesicle textures in types S, ST and T of modal scoriaceous lapilli, under plane light. (a) Type S in the lower part; (b) Type ST in the lower part; (c) Type T in the lower part; (d) Type S in the upper part; (e) Type ST in the upper part; (f) Type T in the upper part. Arrows indicate microlites of feldspars in the T zones. All images are taken at 25× magnification.	미상	현미경관찰	Photomicrographs that show typical vesicle textures in types S, ST and T of modal scoriaceous lapilli, under plane light. (a) Type S in the lower part; (b) Type ST in the lower part; (c) Type T in the lower part; (d) Type S in the upper part; (e) Type ST in the upper part; (f) Type T in the upper part. Arrows indicate microlites of feldspars in the T zones. All images are taken at 25×	울릉도 죽암분석층에서 나온 화성쇄설물들의 조직과 분화유형(자원환경지질 Econ_v52n5p459)	37.549811 130.893642; 37.549811 130.916000; 37.531500 130.916000; 37.531500 130.893642
1774	Proximal/Medial	Histograms showing density range for the scoriaceous lapilli from (a) Ja1 and (b) Ja2 of the lower part, and (c) Ja3 and (d) Ja4 of the upper part in the Jugam Scoria Deposits.	미상	현미경관찰	Histograms showing density range for the scoriaceous lapilli from (a) Ja1 and (b) Ja2 of the lower part, and (c) Ja3 and (d) Ja4 of the upper part in the Jugam Scoria Deposits.	울릉도 죽암분석층에서 나온 화성쇄설물들의 조직과 분화유형(자원환경지질 Econ_v52n5p459)	37.549811 130.893642; 37.549811 130.916000; 37.531500 130.916000; 37.531500 130.893642
1775	Proximal/Medial	Histograms showing vesicularity distribution for the scoriaceous lapilli from (a) Ja1 and (b) Ja2 of the lower part, and (c) Ja3 and (d) Ja4 of the upper part in the Jugam Scoria Deposits.	미상	현미경관찰	Histograms showing vesicularity distribution for the scoriaceous lapilli from (a) Ja1 and (b) Ja2 of the lower part, and (c) Ja3 and (d) Ja4 of the upper part in the Jugam Scoria	울릉도 죽암분석층에서 나온 화성쇄설물들의 조직과 분화유형(자원환경지질 Econ_v52n5p459)	37.549811 130.893642; 37.549811 130.916000; 37.531500 130.916000; 37.531500 130.893642
1776	Proximal/Medial	Quantitative parameters of scoriaceous lapilli from the Jugam Scoria Deposits	미상	현미경관찰	Quantitative parameters of scoriaceous lapilli from the Jugam Scoria Deposits	울릉도 죽암분석층에서 나온 화성쇄설물들의 조직과 분화유형(자원환경지질 Econ_v52n5p459)	37.549811 130.893642; 37.549811 130.916000; 37.531500 130.916000; 37.531500 130.893642
1777	OS-3, EW-1, SM-1, SM-3	(a) Location of the study area, (b) The geological map of the study area (modified after Lee et al., 2018).	미상	XRF, XRD, EPMA, SHRIMP	(a) Location of the study area, (b) The geological map of the study area (modified after Lee et al., 2018).	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1778	OS-3, EW-1, SM-1, SM-3	Location of sampling points. (a) Oseongsan (OS) and Eulwangsan (EW) (modified after Lee et al., 2018); (b) Sammokdo (SM).	미상	XRF, XRD, EPMA, SHRIMP	Location of sampling points. (a) Oseongsan (OS) and Eulwangsan (EW) (modified after Lee et al., 2018); (b) Sammokdo (SM).	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1779	OS-3, EW-1, SM-1, SM-3	Microscopic photographs of biotite granite. (a, c, and e) crossed nicols; (b, d, and f) open nicols. (a~d) Small veinlet-type fluorite together with quartz (a, b: OS-3; c, d: EW-1), (e, f) Minerals composing of biotite granites containing amphiboles (SM-1). Qz=Quartz; Pl=Plagioclase; K-f=K-feldspar; Mc=Microcline; Ser=Sericite; Bt=Biotite; Chl=Chlorite; Amp=Amphibole; Fl=Fluorite.	미상	XRF, XRD, EPMA, SHRIMP	Microscopic photographs of biotite granite. (a, c, and e) crossed nicols; (b, d, and f) open nicols. (a~d) Small veinlet-type fluorite together with quartz (a, b: OS-3; c, d: EW-1), (e, f) Minerals composing of biotite granites containing amphiboles (SM-1). Qz=Quartz; Pl=Plagioclase; K-f=K-feldspar; Mc=Microcline; Ser=Sericite; Bt=Biotite; Chl=Chlorite; Amp=Amphibole; Fl=Fluorite.	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1780	OS-3, EW-1, SM-1, SM-3	Microscopic photographs of mylonite and dykes. (a, c, and e) crossed nicols; (b, d, and f) open nicols. (a~d) Sericite including cataclastic quartz grains or sericite filled in the micro-fractures of quartz (a, b: OS-7; c, d: EW-10), (e, f) Biotite/chlorite and amphiboles included in mylonite (SM-9). Qz=Quartz; Pl=Plagioclase; K-f=K-feldspar; Ser=Sericate; Bt=Biotite; Chl=Chlorite; Amp=Amphibole.	미상	XRF, XRD, EPMA, SHRIMP	Microscopic photographs of mylonite and dykes. (a, c, and e) crossed nicols; (b, d, and f) open nicols. (a~d) Sericite including cataclastic quartz grains or sericite filled in the micro-fractures of quartz (a, b: OS-7; c, d: EW-10), (e, f) Biotite/chlorite and amphiboles included in mylonite (SM-9). Qz=Quartz; Pl=Plagioclase; K-f=K-feldspar; Ser=Sericate;	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1781	OS-3, EW-1, SM-1, SM-3	The BSE images on the rocks containing fluorine (a~c: Oseongsan, d~f: Eulwangsan; g~i: Sammokdo). (a) Quartz, K-feldspar, biotite, chlorite, sericite, and fluorite in biotite granite (OS-2), (b) Chlorite phenocryst included in andesite dyke (OS-6), (c) Sericite in mylonite (OS-7), (d) Small veinlet type of fluorite in biotite granite (EW-2), (e) Vein of quartz and fluorite in biotite granite (EW-3), (f) Quartz and sericite in mylonite (EW-10), (g) Biotite, chlorite, sericite, and amphibole in biotite granite (SM-4), (h) Subhedral biotite/chlorite and anhedral amphibole in basaltic andesite dyke (SM-9), (i) Euhedral biotite/chlorite and chlorite phenocryst in basaltic andesite dyke (SM-10). Qz=quartz; Pl=plagioclase; K-f=K-feldspar; Ser=sericite; Bt=biotite; Chl=chlorite; Amp=Amphibole; Fl=fluorite.	미상	XRF, XRD, EPMA, SHRIMP	The BSE images on the rocks containing fluorine (a~c: Oseongsan, d~f: Eulwangsan; g~i: Sammokdo). (a) Quartz, K-feldspar, biotite, chlorite, sericite, and fluorite in biotite granite (OS-2), (b) Chlorite phenocryst included in andesite dyke (OS-6), (c) Sericite in mylonite (OS-7), (d) Small veinlet type of fluorite in biotite granite (EW-2), (e) Vein of quartz and fluorite in biotite granite (EW-3), (f) Quartz and sericite in mylonite (EW-10), (g) Biotite, chlorite, sericite, and amphibole in biotite granite (SM-4), (h) Subhedral biotite/chlorite and anhedral amphibole in basaltic andesite dyke (SM-9), (i) Euhedral biotite/chlorite and chlorite phenocryst in basaltic andesite dyke (SM-10). Qz=quartz; Pl=plagioclase; K-f=K-feldspar; Ser=sericite; Bt=biotite; Chl=chlorite; Amp=Amphibole; Fl=fluorite.	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1782	OS-3, EW-1, SM-1, SM-3	The results of qualitative XRD analyses on the rocks within the study area. The peaks of sericite and muscovite are identical, and only that of muscovite is presented. (a) Biotite granites in the Oseongsan area (OS-1, 2, 3, 4), (b) Mylonite in the Oseongsan area (OS-7), (c) Biotite granites in the Eulwangsan area (EW-1, 2, 3), (d) Mylonite in the Eulwangsan area (EW-10), (e) Biotite granites in the Sammokdo area (SM-1, 2, 3, 4), (f) Basaltic andesite dykes in the Sammokdo area (SM- 9, 10).	미상	XRF, XRD, EPMA, SHRIMP	The results of qualitative XRD analyses on the rocks within the study area. The peaks of sericite and muscovite are identical, and only that of muscovite is presented. (a) Biotite granites in the Oseongsan area (OS-1, 2, 3, 4), (b) Mylonite in the Oseongsan area (OS-7), (c) Biotite granites in the Eulwangsan area (EW-1, 2, 3), (d) Mylonite in the Eulwangsan area (EW-10), (e) Biotite granites in the Sammokdo area (SM-1, 2, 3, 4), (f) Basaltic andesite dykes in the	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1783	OS-3, EW-1, SM-1, SM-3	X-ray diffractograms of fluorites overlapped by those of K-feldspars. The shoulders were identified when fluorite existed in biotite granite (OS-3, 4; EW-1, 2, 3), but they were not observed in dykes and mylonites. (a) Biotite granite (OS-1, 2, 3, 4) and mylonite (OS-7) in the Oseongsan area, (b) Biotite granite (EW-1, 2, 3) and mylonite (EW-10) in the Eulwangsan area, (c) Biotite granite (SM-1, 2, 3, 4) and basaltic andesite dykes (SM-9, 10) in the Sammokdo area.	미상	XRF, XRD, EPMA, SHRIMP	X-ray diffractograms of fluorites overlapped by those of K-feldspars. The shoulders were identified when fluorite existed in biotite granite (OS-3, 4; EW-1, 2, 3), but they were not observed in dykes and mylonites. (a) Biotite granite (OS-1, 2, 3, 4) and mylonite (OS-7) in the Oseongsan area, (b) Biotite granite (EW-1, 2, 3) and mylonite (EW-10) in the Eulwangsan area, (c) Biotite granite (SM-1, 2, 3, 4) and basaltic andesite dykes (SM-9, 10) in the Sammokdo area.	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1784	OS-3, EW-1, SM-1, SM-3	Cathodoluminescence (CL) images for the analysed zircon grains separated from the study area with locations of analysed spots and their apparent areas in Ma. (a) Sample OS-3, (b) Sample EW-1, (c) Sample SM-1, (d) sample SM-3. Spots diameter = 25 µm.	미상	XRF, XRD, EPMA, SHRIMP	Cathodoluminescence (CL) images for the analysed zircon grains separated from the study area with locations of analysed spots and their apparent areas in Ma. (a) Sample OS-3, (b) Sample EW-1, (c) Sample SM-1, (d) sample SM-3. Spots diameter = 25 µm.	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1785	OS-3, EW-1, SM-1, SM-3	Concordia diagram for the zircons separated from biotite granites in the study area. (a) Sample OS-3, (b) Sample EW-1, (c) Sample SM-1, (d) Sample SM-3.	미상	XRF, XRD, EPMA, SHRIMP	Concordia diagram for the zircons separated from biotite granites in the study area. (a) Sample OS-3, (b) Sample EW-1, (c) Sample SM-1, (d) Sample SM-3.	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1786	OS-3, EW-1, SM-1, SM-3	The results of XRF analyses on the rocks within the study area (wt%)	미상	XRF, XRD, EPMA, SHRIMP	The results of XRF analyses on the rocks within the study area (wt%)	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1787	OS-3, EW-1, SM-1, SM-3	The results of XRD quantitative analyses on the rocks within the study area (wt%)	미상	XRF, XRD, EPMA, SHRIMP	The results of XRD quantitative analyses on the rocks within the study area (wt%)	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1788	OS-3, EW-1, SM-1, SM-3	The EPMA analytical results on the average fluorine concentrations of minerals composed of the rocks within the study area (wt%)	미상	XRF, XRD, EPMA, SHRIMP	The EPMA analytical results on the average fluorine concentrations of minerals composed of the rocks within the study area (wt%)	인천 용유도와 삼목도 지역 내 분포하는 자연기원 불소에 대한 지구화학적 연구 (자원환경지질 Econ_v52n4p275)	37.532803 126.343944; 37.532803 126.574931; 37.417025 126.574931; 37.417025 126.343944
1789	BHV-4, BH-13/75/95/91/23/32/33	Regional geologic map of the Cheongyang gold field area. NM = Nangrim Massif, PB = Pyongnam Basin, IB = Imjingang Belt, GM = Gyeonggi Massif, OB = Ogcheon Basin, TB = Taebaegsan Basin, YM = Yeongnam Massif, GB = Gyeongsang Basin.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Regional geologic map of the Cheongyang gold field area. NM = Nangrim Massif, PB = Pyongnam Basin, IB = Imjingang Belt, GM = Gyeonggi Massif, OB = Ogcheon Basin, TB = Taebaegsan Basin, YM = Yeongnam Massif, GB = Gyeongsang Basin.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1790	BHV-4, BH-13/75/95/91/23/32/33	Geologic map of the Samgwang deposit area. (a) Samgwang deposit, (b) Bonhang adit.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Geologic map of the Samgwang deposit area. (a) Samgwang deposit, (b) Bonhang adit.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1791	BHV-4, BH-13/75/95/91/23/32/33	Photomicrographs of polished ore samples from the Samgwang deposit. Asp: arsenopyrite, Cp: chalcopyrite, El: electrum, Gn: galena, Py: pyrite, Sph: sphalerite.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Photomicrographs of polished ore samples from the Samgwang deposit. Asp: arsenopyrite, Cp: chalcopyrite, El: electrum, Gn: galena, Py: pyrite, Sph: sphalerite.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1792	BHV-4, BH-13/75/95/91/23/32/33	Box-whisker diagram of portable XRF analysis of outcrops in Bonhang adit. (a, d) schist (b, e) gneiss (c, f) quartz vein.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Box-whisker diagram of portable XRF analysis of outcrops in Bonhang adit. (a, d) schist (b, e) gneiss (c, f) quartz vein.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1793	BHV-4, BH-13/75/95/91/23/32/33	Frequency of measured minerals using portable SWIR analysis according to lithofacies in Bonhang adit.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Frequency of measured minerals using portable SWIR analysis according to lithofacies in Bonhang adit.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1794	BHV-4, BH-13/75/95/91/23/32/33	Quantitative XRF-ICP data vs. portable XRF data for outcrops in Bonhang adit. (a) XRF vs. portable XRF for major elements, (b) ICP vs. portable XRF for trace elements.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Quantitative XRF-ICP data vs. portable XRF data for outcrops in Bonhang adit. (a) XRF vs. portable XRF for major elements, (b) ICP vs. portable XRF for trace elements.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1795	BHV-4, BH-13/75/95/91/23/32/33	Quantitative XRF-ICP data vs. portable XRF data for polished rock slabs from Bonhang adit. (a) XRF vs. portable XRF for major elements, (b) ICP vs. portable XRF for trace elements.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Quantitative XRF-ICP data vs. portable XRF data for polished rock slabs from Bonhang adit. (a) XRF vs. portable XRF for major elements, (b) ICP vs. portable XRF for trace elements.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1796	BHV-4, BH-13/75/95/91/23/32/33	XRD patterns for altered wallrocks contacted with quartz veins in Bonhang adit.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	XRD patterns for altered wallrocks contacted with quartz veins in Bonhang adit.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1797	BHV-4, BH-13/75/95/91/23/32/33	Correlation diagrams for As and other representative elements from portable XRF analysis for outcrops in Bonhang adit.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Correlation diagrams for As and other representative elements from portable XRF analysis for outcrops in Bonhang adit.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1798	BHV-4, BH-13/75/95/91/23/32/33	Contour maps of element dispersion from portable XRF analysis for outcrops in Bonhang adit.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Contour maps of element dispersion from portable XRF analysis for outcrops in Bonhang adit.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1799	BHV-4, BH-13/75/95/91/23/32/33	Contour maps for sericite and chlorite from portable SWIR analysis for outcrops in Bonhang adit.	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Contour maps for sericite and chlorite from portable SWIR analysis for outcrops in Bonhang adit.	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1800	BHV-4, BH-13/75/95/91/23/32/33	Summary of portable XRF analysis for outcrops in Bonhang adit	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Summary of portable XRF analysis for outcrops in Bonhang adit	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1801	BHV-4, BH-13/75/95/91/23/32/33	Comparison between portable XRF analysis for outcrops and polished rock slabs from Bonhang adit	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Comparison between portable XRF analysis for outcrops and polished rock slabs from Bonhang adit	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778
1802	BHV-4, BH-13/75/95/91/23/32/33	Major and trace element analysis using XRF and ICP for selected rock samples from Bonhang adit	Innov-X Delta Advanced, Halo Manager	XRF, SWIR, ICP-AES, ICP-MS, XRD	Major and trace element analysis using XRF and ICP for selected rock samples from Bonhang adit	휴대용 XRF와 단파장적외선 분광분석을 이용한 삼광 금광상의 원소분산 및 모암 변질 분석(자원환경지질 Econ_v52n4p259)	36.519722 126.882778

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1803	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Regional geologic map of the Hwanggangri Mineralized District. J: Jecheon granite, M: Muamsa granite, S: Susan granite, W: Weolaksan granite, NM: Nangrim massif, PB: Pyeongnam basin, IB: Imjingang Belt, GM: Gyeonggi massif, OB: Okcheon belt, YM: Yeongnam massif, GB: Gyeongsang basin.	미상	EPMA	Regional geologic map of the Hwanggangri Mineralized District. J: Jecheon granite, M: Muamsa granite, S: Susan granite, W: Weolaksan granite, NM: Nangrim massif, PB: Pyeongnam basin, IB: Imjingang Belt, GM: Gyeonggi massif, OB: Okcheon belt, YM: Yeongnam massif, GB: Gyeongsang	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1804	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Geologic map of the Wooseok deposit(Modified from Park and Park, 1979).	미상	EPMA	Geologic map of the Wooseok deposit(Modified from Park and Park, 1979).	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1805	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Cross section of the Wooseok deposit(Modified from KORES, 1981).	미상	EPMA	Cross section of the Wooseok deposit(Modified from KORES, 1981).	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1806	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Representative images of polished sections from the South(a-c), No.3(d-f), Main(g-i) and Daejeol(j-l) adit in the Wooseok deposit. (a-c) Pyrrhotite coexisting with pyrite and replaced by sphalerite and chalcopyrite, (d) Galena and sphalerite in contact with subhedral pyrite, (e) Chalcopyrite disease showing dusting texture in sphalerite, (f) Molybdenite coexisting with pyrrhotite and chalcopyrite, (g) Pyrite and pyrrhotite replaced by galena, sphalerite and chalcopyrite, (h) Arsenopyrite replaced by pyrrhotite, chalcopyrite and sphalerite, (i) Chalcopyrite, pyrrhotite and galena cut by late pyrite, (j) magnetite and hematite replaced by pyrite and chalcopyrite, (k) Molybdenite coexisting with scheelite and wolframite, (l) Pyrite and pyrrhotite replaced by sphalerite and galena. Abbreviations: Asp: arsenopyrite, Gn: galena, Ht: hematite, Mt: magnetite, Sch: scheelite, Sph: sphalerite, Wf: wolframite, Refer to Fig. 4 others.	미상	EPMA	Representative images of polished sections from the South(a-c), No.3(d-f), Main(g-i) and Daejeol(j-l) adit in the Wooseok deposit. (a-c) Pyrrhotite coexisting with pyrite and replaced by sphalerite and chalcopyrite, (d) Galena and sphalerite in contact with subhedral pyrite, (e) Chalcopyrite disease showing dusting texture in sphalerite, (f) Molybdenite coexisting with pyrrhotite and chalcopyrite, (g) Pyrite and pyrrhotite replaced by galena, sphalerite and chalcopyrite, (h) Arsenopyrite replaced by pyrrhotite, chalcopyrite and sphalerite, (i) Chalcopyrite, pyrrhotite and galena cut by late pyrite, (j) magnetite and hematite replaced by pyrite and chalcopyrite, (k) Molybdenite coexisting with scheelite and wolframite, (l) Pyrite and pyrrhotite replaced by sphalerite and galena. Abbreviations: Asp: arsenopyrite, Gn: galena, Ht: hematite, Mt: magnetite, Sch: scheelite, Sph: sphalerite, Wf: wolframite, Refer to	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1807	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Paragenetic sequence of minerals in the Wooseok deposit.	미상	EPMA	Paragenetic sequence of minerals in the Wooseok deposit.	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1808	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Ternary diagrams of chemical composition of garnet and pyroxene from the Wooseok deposit and representative ore deposits in the Hwangganri and Taebaeksan mineralized district (data from Chang and Park, 1988; Choi and Kim, 1989; Choi et al., 2007; Kim et al., 2012; Lim et al., 2013; Moon, 1983; Yun, 1979, 1983).	미상	EPMA	Ternary diagrams of chemical composition of garnet and pyroxene from the Wooseok deposit and representative ore deposits in the Hwangganri and Taebaeksan mineralized district (data from Chang and Park, 1988; Choi and Kim, 1989; Choi et al., 2007; Kim et al., 2012; Lim et al., 2013; Moon, 1983; Yun, 1979, 1983).	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1809	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Chemical compositions of sphalerite from the Wooseok deposit.	미상	EPMA	Chemical compositions of sphalerite from the Wooseok deposit.	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1810	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Ternary diagram showing chemical compositions of sphalerite from the Wooseok deposit and representative Pb-Zn and W deposits in other areas: Dangdu(Lim et al., 2013), Subok(Shin et al., 2017), Eunch(Park et al., 1988), Samgwang(Yoo et al., 2002), Sangdong(Moon, 1983), Tungsten deposits in Japan(Shibue, 1988).	미상	EPMA	Ternary diagram showing chemical compositions of sphalerite from the Wooseok deposit and representative Pb-Zn and W deposits in other areas: Dangdu(Lim et al., 2013), Subok(Shin et al., 2017), Eunch(Park et al., 1988), Samgwang(Yoo et al., 2002), Sangdong(Moon, 1983), Tungsten deposits in Japan(Shibue, 1988).	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1811	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Oxygen fugacity vs sulfur fugacity diagram showing depositional condition of oxide and sulfide phases at 1kb and 300 °C (Modified from Pandit, 2015).	미상	EPMA	Oxygen fugacity vs sulfur fugacity diagram showing depositional condition of oxide and sulfide phases at 1kb and 300 °C (Modified from Pandit, 2015).	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1812	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Representative EPMA analyses of garnet from the Wooseok deposit	미상	EPMA	Representative EPMA analyses of garnet from the Wooseok deposit	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1813	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Representative EPMA analyses of pyroxene from the Wooseok deposit	미상	EPMA	Representative EPMA analyses of pyroxene from the Wooseok deposit	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1814	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Representative EPMA analyses of sphalerite from the Wooseok deposit	미상	EPMA	Representative EPMA analyses of sphalerite from the Wooseok deposit	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1815	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Sulfur isotope compositions of sulfide minerals from the Wooseok deposit	미상	EPMA	Sulfur isotope compositions of sulfide minerals from the Wooseok deposit	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1816	WS30-1-3/30-1-5/30-2-7/32-1-8/32-1-9/30/30-1-4/30-2-6/32/23/23-1/23-2/19/32-2-3/24/12/8	Features of various metallic ore deposits in the Hwanggangri mineralized district	미상	EPMA	Features of various metallic ore deposits in the Hwanggangri mineralized district	우석광상 다금속 광화작용의 시공간적 특성변화(자원환경지질 Econ_v51n6p493)	36.997778 128.175833
1817	GJG-1~5	X-ray diffraction patterns of five green-blue coloured mineral groups.	미상	XRD, EDS, SEM	X-ray diffraction patterns of five green-blue coloured mineral groups.	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1818	GJG-1~5	SEM images and EDS spectra of brochantite, schulenbergite, and serpierite from the Gukjeon mine. (A-C) brochantite, (D-F) schulenbergite, (G-I) serpierite.	미상	XRD, EDS, SEM	SEM images and EDS spectra of brochantite, schulenbergite, and serpierite from the Gukjeon mine. (A-C) brochantite, (D-F) schulenbergite, (G-I) serpierite.	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1819	GJG-1~5	SEM images and EDS spectra of hydrowoodwardite, glaucocerinite, and bechererite from the Gukjeon mine. (A, B) hydrowoodwardite, (C, D) glaucocerinite, (E, F) bechererite.	미상	XRD, EDS, SEM	SEM images and EDS spectra of hydrowoodwardite, glaucocerinite, and bechererite from the Gukjeon mine. (A, B) hydrowoodwardite, (C, D) glaucocerinite, (E, F) bechererite.	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1820	GJG-1~5	Ternary diagram of CuO-ZnO-(Al ₂ O ₃ +SiO ₂ +CaO) contents of green-blue coloured minerals from the Gukjeon mine.	미상	XRD, EDS, SEM	Ternary diagram of CuO-ZnO-(Al ₂ O ₃ +SiO ₂ +CaO) contents of green-blue coloured minerals from the Gukjeon mine.	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1821	GJG-1~5	Representative chemical composition (wt.%) and empirical formula of brochantite from the Gukjeon mine using EDS quantitative analyses	미상	XRD, EDS, SEM	Representative chemical composition (wt.%) and empirical formula of brochantite from the Gukjeon mine using EDS quantitative analyses	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1822	GJG-1~5	Representative chemical composition (wt.%) and empirical formula of schulenbergite from the Gukjeon mine using EDS quantitative analyses	미상	XRD, EDS, SEM	Representative chemical composition (wt.%) and empirical formula of schulenbergite from the Gukjeon mine using EDS quantitative analyses	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1823	GJG-1~5	Representative chemical composition (wt.%) and empirical formula of serpierite from the Gukjeon mine using EDS quantitative analyses	미상	XRD, EDS, SEM	Representative chemical composition (wt.%) and empirical formula of serpierite from the Gukjeon mine using EDS quantitative analyses	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1824	GJG-1~5	Colour and mineral assemblage of five green-blue coloured mineral groups	미상	XRD, EDS, SEM	Colour and mineral assemblage of five green-blue coloured mineral groups	밀양 국전광산의 녹-청색 구리-아연 수화 황산염 광물(자원환경지질 Econ_v51n6p473)	35.500000 129.902889; 35.500000 129.919556; 35.466667 129.919556; 35.466667 129.902889
1825	AS1~4, MJ1~4, JS1~6	Satellite image and geological map around Asan, Chungnam Province, South Korea (modified from Shin et al., 1979).	미상	XRD, EDS, EPMA	Satellite image and geological map around Asan, Chungnam Province, South Korea (modified from Shin et al., 1979).	국내탄산염암지역(아산, 무주, 장수)에서 산출되는 자연발생석면의 광물학적 특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1826	AS1~4, MJ1~4, JS1~6	Satellite image and geological map around Muju, Jeonbuk Province, South Korea (modified from Lee and Nam, 1969).	미상	XRD, EDS, EPMA	Satellite image and geological map around Muju, Jeonbuk Province, South Korea (modified from Lee and Nam, 1969).	국내탄산염암지역(아산, 무주, 장수)에서 산출되는 자연발생석면의 광물학적 특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1827	AS1~4, MJ1~4, JS1~6	Satellite image and geological map around Jangsu, Jeonbuk Province, South Korea (modified from Hong and Yun, 1993).	미상	XRD, EDS, EPMA	Satellite image and geological map around Jangsu, Jeonbuk Province, South Korea (modified from Hong and Yun, 1993).	국내탄산염암지역(아산, 무주, 장수)에서 산출되는 자연발생석면의 광물학적 특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1828	AS1~4, MJ1~4, JS1~6	X-ray diffraction patterns of fibrous serpentine samples from Asan (A), Muju (B), and Jangsu (C) [Cal: calcite, D: dolomite, Sep: sepiolite, Ser: serpentine, Tc: talc, Tr: tremolite, Ver: vermiculite].	미상	XRD, EDS, EPMA	X-ray diffraction patterns of fibrous serpentine samples from Asan (A), Muju (B), and Jangsu (C) [Cal: calcite, D: dolomite, Sep: sepiolite, Ser: serpentine, Tc: talc, Tr: tremolite, Ver: vermiculite].	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1829	AS1~4, MJ1~4, JS1~6	Photomicrographs of carbonate rocks from Asan: AS 1 (A), AS 2 (B), AS 3 (C), and AS 4 (D, E) [Cal: calcite, Oli: olivine, Tc: Talc, Tr: tremolite].	미상	XRD, EDS, EPMA	Photomicrographs of carbonate rocks from Asan: AS 1 (A), AS 2 (B), AS 3 (C), and AS 4 (D, E) [Cal: calcite, Oli: olivine, Tc: Talc, Tr: tremolite].	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1830	AS1~4, MJ1~4, JS1~6	Photomicrographs of carbonate rocks from Muju: MJ 1 (A), MJ 2-1 (B), MJ 2-2 (C), MJ 2-3 (D), MJ 3 (E), and MJ 4 (F) [Amp: amphibole, Cal: calcite, Oli: olivine, Sep: Sepiolite, Ser: serpentine, Tr: tremolite].	미상	XRD, EDS, EPMA	Photomicrographs of carbonate rocks from Muju: MJ 1 (A), MJ 2-1 (B), MJ 2-2 (C), MJ 2-3 (D), MJ 3 (E), and MJ 4 (F) [Amp: amphibole, Cal: calcite, Oli: olivine, Sep: Sepiolite, Ser: serpentine, Tr: tremolite].	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1831	AS1~4, MJ1~4, JS1~6	Photomicrographs of carbonate rocks from Jangsu: JS 1 (A), JS 2 (B), JS 3-1 (C), JS 3-2 (D), JS 4 (E), JS 5 (F) and JS 6 (G) [Cal: calcite, Dol: dolomite, Oli: olivine, Sep: Sepiolite, Ser: serpentine, Tc: talc, Tr: tremolite].	미상	XRD, EDS, EPMA	Photomicrographs of carbonate rocks from Jangsu: JS 1 (A), JS 2 (B), JS 3-1 (C), JS 3-2 (D), JS 4 (E), JS 5 (F) and JS 6 (G) [Cal: calcite, Dol: dolomite, Oli: olivine, Sep: Sepiolite, Ser: serpentine, Tc: talc, Tr: tremolite].	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1832	AS1~4, MJ1~4, JS1~6	Mg/(Mg+Fe) atomic ratio vs numbers of Si in the unit cell formula of amphiboles for fibrous tremolite occurred in the carbonate rock (according to Leake and Woolley, 1997).	미상	XRD, EDS, EPMA	Mg/(Mg+Fe) atomic ratio vs numbers of Si in the unit cell formula of amphiboles for fibrous tremolite occurred in the carbonate rock (according to Leake and Woolley, 1997).	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1833	AS1~4, MJ1~4, JS1~6	PLM images of fibrous tremolite: One polar (A), crossed polar and retardation polar (B), central-stop DSO images (C; fiber diameter direction, D; fiber length direction).	미상	XRD, EDS, EPMA	PLM images of fibrous tremolite: One polar (A), crossed polar and retardation polar (B), central-stop DSO images (C; fiber diameter direction, D; fiber length direction).	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1834	AS1~4, MJ1~4, JS1~6	SEM-EDS analysis of the fibrous tremolite (A, C) and non fibrous tremolite (D).	미상	XRD, EDS, EPMA	SEM-EDS analysis of the fibrous tremolite (A, C) and non fibrous tremolite (D).	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1835	AS1~4, MJ1~4, JS1~6	Summary of field and naked-eye observation of the asbestos containing samples from the host rock, carbonate rock	미상	XRD, EDS, EPMA	Summary of field and naked-eye observation of the asbestos containing samples from the host rock, carbonate rock	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1836	AS1~4, MJ1~4, JS1~6	X-ray powder diffraction data (spacing in Å) of asbestos minerals from JCPDS (Joint Committee on Powder Diffraction Standards)	미상	XRD, EDS, EPMA	X-ray powder diffraction data (spacing in Å) of asbestos minerals from JCPDS (Joint Committee on Powder Diffraction Standards)	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1837	AS1~4, MJ1~4, JS1~6	Electron Microprobe Analysis(EPMA) and structural formulas of fibrous tremolite from sample AS 1, AS 2, AS 3, AS 4, MJ 1, JS 1, JS 3	미상	XRD, EDS, EPMA	Electron Microprobe Analysis(EPMA) and structural formulas of fibrous tremolite from sample AS 1, AS 2, AS 3, AS 4, MJ 1, JS 1, JS 3	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667
1838	AS1~4, MJ1~4, JS1~6	Mineral assemblages of tremolite asbestos containing samples from carbonate rocks	미상	XRD, EDS, EPMA	Mineral assemblages of tremolite asbestos containing samples from carbonate rocks	국내탄산염암지역(아산, 무주, 장수)에서 산출되는자연발생석면의광물학적특성(자원환경지질 Econ_v51n4p309)	36.816667 127.033333 35.900000 127.683333 35.766667 127.566667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1839	SDS-4/7/8, SDB-7/10/11/24	Geologic map of the study area(modified from Lim et al., 2016). Abbreviations for inset figure: NM: Nangrim Massif, PB: Pyeongnam Basin, IB: Imjingang Belt, GM: Gyeonggi Massif, TB: Taebaeksan Basin, OMB: Okcheon Metamorphic Belt, YM: Yeongnam Massif, GB: Gyeongsang Basin.	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Geologic map of the study area(modified from Lim et al., 2016). Abbreviations for inset figure: NM: Nangrim Massif, PB: Pyeongnam Basin, IB: Imjingang Belt, GM: Gyeonggi Massif, TB: Taebaeksan Basin, OMB: Okcheon Metamorphic Belt, YM: Yeongnam	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1840	SDS-4/7/8, SDB-7/10/11/24	Paragenetic sequence of minerals in the Seongdo deposit.	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Paragenetic sequence of minerals in the Seongdo deposit.	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1841	SDS-4/7/8, SDB-7/10/11/24	Photomicrographs of minerals for skarn ore (A-E) and hydrothermal ore (F-L) from the Seongdo deposit. (A) Hedenbergite coexisting with garnet. (B) back scattered electron image of zoned garnet. (C) Pyroxene and garnet replaced by sulfide minerals. (D) Wollastonite cut by calcite veinlet (E) Sphalerite coexisting with galena and pyrrhotite. (F) Sericitization related to quartz vein. (G) Arsenopyrite replaced by pyrite and chalcopyrite. (H) Arsenopyrite coexisting with chalcopyrite and sphalerite. (I) Chalcopyrite disease showing bead chains in sphalerite. (J) Chalcopyrite disease showing dusting texture in sphalerite. (K) Stannite coexisting with galena, chalcopyrite and sphalerite. (L) Galena coexisting with native Bi. Abbreviations: Ad: andradite, Gr: grossularite, Hd: hedenbergite, Bi: native bismuth, Cp: chalcopyrite, St: stannite, Qtz: quartz, Ser: sericite, Wo: wollastonite, Cc: calcite. Refer to Figure 2 for others.	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Photomicrographs of minerals for skarn ore (A-E) and hydrothermal ore (F-L) from the Seongdo deposit. (A) Hedenbergite coexisting with garnet. (B) back scattered electron image of zoned garnet. (C) Pyroxene and garnet replaced by sulfide minerals. (D) Wollastonite cut by calcite veinlet (E) Sphalerite coexisting with galena and pyrrhotite. (F) Sericitization related to quartz vein. (G) Arsenopyrite replaced by pyrite and chalcopyrite. (H) Arsenopyrite coexisting with chalcopyrite and sphalerite. (I) Chalcopyrite disease showing bead chains in sphalerite. (J) Chalcopyrite disease showing dusting texture in sphalerite. (K) Stannite coexisting with galena, chalcopyrite and sphalerite. (L) Galena coexisting with native Bi. Abbreviations: Ad: andradite, Gr: grossularite, Hd: hedenbergite, Bi: native bismuth, Cp: chalcopyrite, St: stannite, Qtz: quartz, Ser: sericite, Wo:	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1842	SDS-4/7/8, SDB-7/10/11/24	Chemical composition of skarn minerals from the Seongdo deposit. (A) pyroxene on johannsenite-diopside-hedenbergite diagram. (B) garnet on pyrope+almandine+spessartine-grossular-andradite diagram.	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Chemical composition of skarn minerals from the Seongdo deposit. (A) pyroxene on johannsenite-diopside-hedenbergite diagram. (B) garnet on pyrope+almandine+spessartine-grossular-andradite diagram.	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1843	SDS-4/7/8, SDB-7/10/11/24	Relationship among FeS, MnS and CdS contents(mole%) of sphalerites from the Seongdo deposit.	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Relationship among FeS, MnS and CdS contents(mole%) of sphalerites from the Seongdo deposit.	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1844	SDS-4/7/8, SDB-7/10/11/24	Position of tin minerals from the Seongdo deposit on Cu/(Cu+Sn) vs. Fe/(Fe+Zn) diagram(after Petruk, 1973).	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Position of tin minerals from the Seongdo deposit on Cu/(Cu+Sn) vs. Fe/(Fe+Zn) diagram(after Petruk, 1973).	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1845	SDS-4/7/8, SDB-7/10/11/24	Sulfur isotope compositions of the Seongdo deposit compared with representative Pb-Zn deposits in the Taebaegsan mineralized district.	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Sulfur isotope compositions of the Seongdo deposit compared with representative Pb-Zn deposits in the Taebaegsan mineralized district.	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1846	SDS-4/7/8, SDB-7/10/11/24	Pseudo-binary condensed T-XAs section of the FeS-As-S system for the Seongdo deposit(after Kretschmar and Scott, 1976).	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Pseudo-binary condensed T-XAs section of the FeS-As-S system for the Seongdo deposit(after Kretschmar and Scott,	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1847	SDS-4/7/8, SDB-7/10/11/24	Temperature-fs2 diagram of the stability field of arsenopyrite from the Seongdo deposit(after Kretschmar and Scott, 1976).	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Temperature-fs2 diagram of the stability field of arsenopyrite from the Seongdo deposit(after Kretschmar and Scott,	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1848	SDS-4/7/8, SDB-7/10/11/24	Diagram showing partitioning of Fe and Zn between stannite and sphalerite at various temperatures from the Seongdo deposit. Temperature lines are based on data by Nakamura and Shima(1982).	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Diagram showing partitioning of Fe and Zn between stannite and sphalerite at various temperatures from the Seongdo deposit. Temperature lines are based on data by Nakamura and Shima(1982).	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1849	SDS-4/7/8, SDB-7/10/11/24	Relationship of FeS, MnS and CdS contents(mole%) for sphalerites from (A)representative Pb-Zn deposits: Yeonhwa and Gagok(Yeonhwa II)(Chon and Shimazaki, 1986), Shinyemi(Kim et al., 1981), (B)representative Au-Ag deposits: Eunchi(Park et al., 1988), Bodeok(So et al., 1993), Samkwang(Yoo et al., 2002), and (C)Seongdo deposit(this study).	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Relationship of FeS, MnS and CdS contents(mole%) for sphalerites from (A)representative Pb-Zn deposits: Yeonhwa and Gagok(Yeonhwa II)(Chon and Shimazaki, 1986), Shinyemi(Kim et al., 1981), (B)representative Au-Ag deposits: Eunchi(Park et al., 1988), Bodeok(So et al., 1993), Samkwang(Yoo et al., 2002), and (C)Seongdo	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1850	SDS-4/7/8, SDB-7/10/11/24	Representative EPMA analyses of pyroxene and garnet from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Representative EPMA analyses of pyroxene and garnet from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1851	SDS-4/7/8, SDB-7/10/11/24	Representative EPMA analyses of sphalerite from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Representative EPMA analyses of sphalerite from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1852	SDS-4/7/8, SDB-7/10/11/24	Representative EPMA analyses of arsenopyrite from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Representative EPMA analyses of arsenopyrite from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1853	SDS-4/7/8, SDB-7/10/11/24	Representative EPMA analyses of galena from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Representative EPMA analyses of galena from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1854	SDS-4/7/8, SDB-7/10/11/24	Representative EPMA analyses of stannite from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Representative EPMA analyses of stannite from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1855	SDS-4/7/8, SDB-7/10/11/24	K-Ar age of sericite associated with hydrothermal quartz vein from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	K-Ar age of sericite associated with hydrothermal quartz vein from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1856	SDS-4/7/8, SDB-7/10/11/24	Sulfur isotope composition of sulfide minerals from the Seongdo deposit	미상	EPMA, 안정동위원소 질량분석기, 불활성기체 질량 분석기	Sulfur isotope composition of sulfide minerals from the Seongdo deposit	괴산 성도 연-아연 광상의 산출광물과 생성환경(자원환경지질 Econ_v50n5p325)	36.811111 127.988889
1857	CW2010, PC201603	(A) Simplified regional geological map of Korea. (B) Detailed geological map (from Song and Cho, 2007) of the study area in (A). Abbreviations = GM: Gyeonggi Massif, TB-Y: Taebaeksan Basin (Yeongwol type), TB-T: Taebaeksan Basin (Tuwibong type), OB: Okcheon Metamorphic Belt, HSZ: Honam Shear Zone, YM: Yeongnam Massif, GM: Gyeongsang Basin.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	(A) Simplified regional geological map of Korea. (B) Detailed geological map (from Song and Cho, 2007) of the study area in (A). Abbreviations = GM: Gyeonggi Massif, TB-Y: Taebaeksan Basin (Yeongwol type), TB-T: Taebaeksan Basin (Tuwibong type), OB: Okcheon Metamorphic Belt, HSZ: Honam Shear Zone, YM: Yeongnam Massif, GM:	경기육괴철원지역페그마타이트내망간-철 인산염광물의광물-지화학적특징및 진화 과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1858	CW2010, PC201603	Discrimination diagrams, (A) A/NK vs. A/CNK (molar), (B) Rb vs. Y-Nb, (C) Chondrite-normalized REE patterns, Abbreviations = Syn-COLG, syn-collision granite; Post-COLG, post-collision granite; VAG, volcanic arc granite; WPG, within plate granite; ORG, ocean ridge granite.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Discrimination diagrams, (A) A/NK vs. A/CNK (molar), (B) Rb vs. Y-Nb, (C) Chondrite-normalized REE patterns, Abbreviations = Syn-COLG, syn-collision granite; Post-COLG, post-collision granite; VAG, volcanic arc granite; WPG, within plate granite; ORG, ocean ridge	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1859	CW2010, PC201603	Nb/Ta vs. Ta (A) and Nb (B) for peraluminous granites. Colored curves represent model of evolution of Nb and Ta during fractionation. Number above curves indicate amount of fractional crystallization (from Ballouard et al., 2016).	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Nb/Ta vs. Ta (A) and Nb (B) for peraluminous granites. Colored curves represent model of evolution of Nb and Ta during fractionation. Number above curves indicate amount of fractional crystallization (from Ballouard et al., 2016).	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1860	CW2010, PC201603	Photomicrographs and scanning electron microscope (SEM) image, (A) Jurassic two-mica granite (opened polars), (B) Garnet crystal with triplite (opened polars), (C) Columbite crystals within the muscovite (reflected light), (D) Fluorapatite included triplite (crossed polar), (E) Phosphosiderite (purple) with jahnsite (orange), Mn-oxide is filled opening space (opened polar), (F) Phosphosiderite (brown) with Mn-oxide (opened polar), (G) Phosphosiderite (monoclinic system), electron microscope (SEM), (H) Mn-oxides filled in the fractures in triplite (reflected light), Abbreviations = Ap, fluorapatite; Bt, biotite; Cm, columbite; Grt, garnet; Jan, jahnsite; Mus, muscovite; Tri, triplite, Psi, phosphosiderite.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Photomicrographs and scanning electron microscope (SEM) image, (A) Jurassic two-mica granite (opened polars), (B) Garnet crystal with triplite (opened polars), (C) Columbite crystals within the muscovite (reflected light), (D) Fluorapatite included triplite (crossed polar), (E) Phosphosiderite (purple) with jahnsite (orange), Mn-oxide is filled opening space (opened polar), (F) Phosphosiderite (brown) with Mn-oxide (opened polar), (G) Phosphosiderite (monoclinic system), electron microscope (SEM), (H) Mn-oxides filled in the fractures in triplite (reflected light), Abbreviations = Ap, fluorapatite; Bt, biotite; Cm, columbite; Grt, garnet; Jan, jahnsite; Mus, muscovite; Tri, triplite,	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1861	CW2010, PC201603	Composition of muscovite plotted in term of molecular proportions of Al, Si, and Fe+Mg+Mn.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Composition of muscovite plotted in term of molecular proportions of Al, Si, and Fe+Mg+Mn.	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1862	CW2010, PC201603	Hull quotient spectra for muscovite in pegmatite, Cheolwon, South Korea.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Hull quotient spectra for muscovite in pegmatite, Cheolwon, South Korea.	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1863	CW2010, PC201603	Chemical composition of garnet in the Fe-Mn-Ca diagram, Abbreviations = Alm, almandine (Fe ₂ +3Al ₂ Si ₃ O ₁₂); Spess, spessartine (Mn ₃ Al ₂ Si ₃ O ₁₂); Gross, grossular {Ca ₃ (Fe ₃ +,Ti) ₂ Si ₃ O ₁₂ }.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Chemical composition of garnet in the Fe-Mn-Ca diagram, Abbreviations = Alm, almandine (Fe ₂ +3Al ₂ Si ₃ O ₁₂); Spess, spessartine (Mn ₃ Al ₂ Si ₃ O ₁₂); Gross, grossular {Ca ₃ (Fe ₃ +,Ti) ₂ Si ₃ O ₁₂ }.	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1864	CW2010, PC201603	Fractionation trend of columbite-tantalite (Mackay and Simandl, 2015) in Cheolwon, Mujoo pegmatite.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Fractionation trend of columbite-tantalite (Mackay and Simandl, 2015) in Cheolwon, Mujoo pegmatite.	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학적특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1865	CW2010, PC201603	F vs. Mn/(Mn+Fe) for triplite, triploidite, wolfeite, and zwieselite (after Vignola et al., 2014).	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	F vs. Mn/(Mn+Fe) for triplite, triploidite, wolfeite, and zwieselite (after Vignola et al., 2014).	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1866	CW2010, PC201603	Schematic Pressure and temperature fields proposed by Černý (1991) and the Phase diagram for kyanite-andalusite and andalusite-silimanite (after Bohlen et al., 1991), Abbreviations = abyssal (AB); muscovite (MS); muscovite-rare-element (MSREL); rare-element (REL); and miarolitic (MI) calsses.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Schematic Pressure and temperature fields proposed by Černý (1991) and the Phase diagram for kyanite-andalusite and andalusite-silimanite (after Bohlen et al., 1991), Abbreviations = abyssal (AB); muscovite (MS); muscovite-rare-element (MSREL); rare-element (REL); and miarolitic (MI) calsses.	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1867	CW2010, PC201603	Evolution trend of phosphate minerals in pegmatite through later magmatic, hydrothermal, and weathering stages.	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Evolution trend of phosphate minerals in pegmatite through later magmatic, hydrothermal, and weathering stages.	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1868	CW2010, PC201603	Representative chemical compositions of Cheolwon two-mica granite, aplite, and triplite pegmatite in Gyeonggi massif, South Korea	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Representative chemical compositions of Cheolwon two-mica granite, aplite, and triplite pegmatite in Gyeonggi massif, South Korea	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1869	CW2010, PC201603	K-Ar age data of muscovite from Cheolwon pegmatite	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	K-Ar age data of muscovite from Cheolwon pegmatite	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1870	CW2010, PC201603	Representative chemical compositions of the muscovite, garnet, and columbite in the pegmatite	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Representative chemical compositions of the muscovite, garnet, and columbite in the pegmatite	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1871	CW2010, PC201603	Representative chemical compositions of the phosphate minerals	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	Representative chemical compositions of the phosphate minerals	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1872	CW2010, PC201603	X-ray diffraction data for the triplite, in the Cheolwon, South Korea	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	X-ray diffraction data for the triplite, in the Cheolwon, South Korea	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1873	CW2010, PC201603	X-ray diffraction data for the phosphosiderite sample, in the Cheolwon, South Korea	미상	ICP-MS, XRD, , VNIR-SWIR, EDS	X-ray diffraction data for the phosphosiderite sample, in the Cheolwon, South Korea	경기육괴철원지역페그마타이트내망간-철인산염광물의광물-지화학특징및 진화과정(자원환경지질 Econ_v50n3p181)	38.319886 127.324711; 38.319886 127.464883; 38.181422 127.464883; 38.181422 127.324711
1874	B24-1~4, CN5-1/2, SJ1/2	Geologic of Uichang region showing the location of Yongjang and Samjeong epithermal gold deposits(modified after Kim and Kim, 1963; Choi and Kim, 1963). Epithermal veins are hosted in Haman and Jindong formation sediments.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Geologic of Uichang region showing the location of Yongjang and Samjeong epithermal gold deposits(modified after Kim and Kim, 1963; Choi and Kim, 1963). Epithermal veins are hosted in Haman and Jindong formation sediments.	창원시의창지역보난자형금광상성인: 반웅경로모델링에의한지구화학적해석(자원환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1875	B24-1~4, CN5-1/2, SJ1/2	Epithermal quartz veins, Uichang region, Changwon city. a: The vein form perpendicular to bedding of cherty rock. Hydrothermal alteration in developed along the bedding and quartz vein. b: The vein form andesitic rock, which in strong hydrothermal alteration.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Epithermal quartz veins, Uichang region, Changwon city. a: The vein form perpendicular to bedding of cherty rock. Hydrothermal alteration in developed along the bedding and quartz vein. b: The vein form andesitic rock, which in strong hydrothermal alteration.	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1876	B24-1~4, CN5-1/2, SJ1/2	Mineral paragenesis for Uichang epithermal system, which showing to the different types of rock(Type A: arkosic sandstone, Type B: cherty rock, Type C: andesitic rock).	SOLVEQ, CHILLER	EPMA, 가열냉각기	Mineral paragenesis for Uichang epithermal system, which showing to the different types of rock(Type A: arkosic sandstone, Type B: cherty rock, Type C: andesitic rock).	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1877	B24-1~4, CN5-1/2, SJ1/2	Microphotographs of alteration minerals and ore minerals. Euhedral arsenopyrite clusters are associated with alteration products of muscovite and calcite in the type A vein(a) and type C vein(c). Type A vein consists arsenopyrite, chalcopyrite, sphalerite and galena(b), and fine-grained electrum grains formed in sphalerite(c). Type C vein consists pyrite, galena and acanthite(e), and very fine grained electrums are contained in pyrite(f).	SOLVEQ, CHILLER	EPMA, 가열냉각기	Microphotographs of alteration minerals and ore minerals. Euhedral arsenopyrite clusters are associated with alteration products of muscovite and calcite in the type A vein(a) and type C vein(c). Type A vein consists arsenopyrite, chalcopyrite, sphalerite and galena(b), and fine-grained electrum grains formed in sphalerite(c). Type C vein consists pyrite, galena and acanthite(e), and very fine grained electrums are contained in	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1878	B24-1~4, CN5-1/2, SJ1/2	Gold and silver concentrations(wt.%) in electrum from type A and type C veins.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Gold and silver concentrations(wt.%) in electrum from type A and type C veins.	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1879	B24-1~4, CN5-1/2, SJ1/2	Reaction path diagram showing total molaity of aqueous component species and silicate minerals during titration of type A vein(Che bed hosted ore) as a function of water/rock ratio at 250oC and 500bar. Abbreviations: qz=quartz, mus=muscovite, chl=chlorite, act=actinolite, mc=microcline, czo=clinozoisite, cal=calcite, ab=albite, ep=epidote.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Reaction path diagram showing total molaity of aqueous component species and silicate minerals during titration of type A vein(Che bed hosted ore) as a function of water/rock ratio at 250oC and 500bar. Abbreviations: qz=quartz, mus=muscovite, chl=chlorite, act=actinolite, mc=microcline, czo=clinozoisite, cal=calcite, ab=albite, ep=epidote.	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1880	B24-1~4, CN5-1/2, SJ1/2	Ag/Au ratios increase lowering of water/rock ratios, that indicate of increasing pH and decreasing total sulfur modeling. Abbreviations: qz=quartz, py=pyrite, gn=galena, sp=sphalerite.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Ag/Au ratios increase lowering of water/rock ratios, that indicate of increasing pH and decreasing total sulfur modeling. Abbreviations: qz=quartz, py=pyrite, gn=galena,	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1881	B24-1~4, CN5-1/2, SJ1/2	Ag/Au ratios increase lowering of water/rock ratios, that indicate of increasing pH and decreasing total sulfur modeling. Abbreviations: qz=quartz, mus=muscovite, chl=chlorite, py=pyrite, gn=galena, sp=sphalerite.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Ag/Au ratios increase lowering of water/rock ratios, that indicate of increasing pH and decreasing total sulfur modeling. Abbreviations: qz=quartz, mus=muscovite, chl=chlorite, py=pyrite, gn=galena, sp=sphalerite.	창원시의창지역보존자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1882	B24-1~4, CN5-1/2, SJ1/2	Simplified cross section showing the geology and veins of Uichang gold deposits. Arkosic sandstone hosted vein(type A vein) consist of lower contents of sulfides and high grade Bonanza type of gold. Cherty rock hosted vein(type B vein) consist of very low contents of sulfides and gold grade. Andesitic rock hosted vein(type C vein) consist of moderate contents of sulfides and gold grade.	SOLVEQ, CHILLER	EPMA, 가열냉각기	Simplified cross section showing the geology and veins of Uichang gold deposits. Arkosic sandstone hosted vein(type A vein) consist of lower contents of sulfides and high grade Bonanza type of gold. Cherty rock hosted vein(type B vein) consist of very low contents of sulfides and gold grade. Andesitic rock hosted vein(type C vein) consist of moderate contents of sulfides and gold grade.	창원시의창지역보난자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1883	B24-1~4, CN5-1/2, SJ1/2	Characteristics features of the different vein types	SOLVEQ, CHILLER	EPMA, 가열냉각기	Characteristics features of the different vein types	창원시의창지역보난자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1884	B24-1~4, CN5-1/2, SJ1/2	Representative electron-microprobe analyses of arsenopyrite from the type A and type C veins	SOLVEQ, CHILLER	EPMA, 가열냉각기	Representative electron-microprobe analyses of arsenopyrite from the type A and type C veins	창원시의창지역보난자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1885	B24-1~4, CN5-1/2, SJ1/2	The Au and Ag contents of the electrum from different vein types	SOLVEQ, CHILLER	EPMA, 가열냉각기	The Au and Ag contents of the electrum from different vein types	창원시의창지역보난자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1886	B24-1~4, CN5-1/2, SJ1/2	Fluid inclusion data for quartz that co-precipitated with electrum in stage II	SOLVEQ, CHILLER	EPMA, 가열냉각기	Fluid inclusion data for quartz that co-precipitated with electrum in stage II	창원시의창지역보난자형금광상성인: 반 응경로모델링에의한지구화학적해석(자원 환경지질 Econ_v50n2p085)	35.292500 128.465833; 35.292500 128.511389; 35.255278 128.511389; 35.255278 128.465833
1887	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Geological map of the Hadong-Sancheong anorthosite complex area (modified from Jeong et al., 1989 and Kim et al., 2002). Dotted line represents Fe-Ti-bearing ore bodies in the Hadong anorthosite.	미상	산소분압	Geological map of the Hadong-Sancheong anorthosite complex area (modified from Jeong et al., 1989 and Kim et al., 2002). Dotted line represents Fe-Ti-bearing ore bodies in the Hadong anorthosite.	하동-산청 회장암체 내 부존하는 하동 함 철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1888	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Locations of Fe-Ti-bearing ore bodies in the Hadong anorthosite. A: Cheongryongri ore body; B: Weolheongri ore body; C: Jonghwari ore body.	미상	산소분압	Locations of Fe-Ti-bearing ore bodies in the Hadong anorthosite. A: Cheongryongri ore body; B: Weolheongri ore body; C: Jonghwari ore	하동-산청 회장암체 내 부존하는 하동 함 철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1889	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Occurrences of ilmenite in the Fe-Ti-bearing dike-like ore body from the Hadong anorthosite. A. disseminated type: Ilmenite disseminates in mafic minerals mainly consisting of amphibole. B. foliated type: Ilmenite is alternated with mafic silicates. C. massive type: Ilmenite is infilled among silicates.	미상	산소분압	Occurrences of ilmenite in the Fe-Ti-bearing dike-like ore body from the Hadong anorthosite. A. disseminated type: Ilmenite disseminates in mafic minerals mainly consisting of amphibole. B. foliated type: Ilmenite is alternated with mafic silicates. C. massive type: Ilmenite is infilled among silicates.	하동-산청 회장암체 내 부존하는 하동 함 철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1890	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Generalized paragenetic sequence of minerals in the Hadong Fe-Ti-bearing ore body.	미상	산소분압	Generalized paragenetic sequence of minerals in the Hadong Fe-Ti-bearing ore body.	하동-산청 회장암체 내 부존하는 하동 함 철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1891	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Photomicrographs of mineral occurrence and assemblage. A. Massive ilmenite(II). B. Foliated ilmeninte. C. Ilmenite- pyrrhotite(Po) assemblage. D. Titanite(Tn) occurs within the fractures of earlier-deposited ilmeninte. E and F. Late sulfides(pyrite(Py), chalcopyrite(Cp), sphalerite(Sl)) occur within the fractures of earlier-deposited ilmeninte and/or pyrrhotite. SIC=silicates.	미상	산소분압	Photomicrographs of mineral occurrence and assemblage. A. Massive ilmenite(II). B. Foliated ilmeninte. C. Ilmenite-pyrrhotite(Po) assemblage. D. Titanite(Tn) occurs within the fractures of earlier-deposited ilmeninte. E and F. Late sulfides(pyrite(Py), chalcopyrite(Cp), sphalerite(Sl)) occur within the fractures of earlier-deposited ilmeninte and/or pyrrhotite. SIC=silicates.	하동-산청 회장암체 내 부존하는 하동 함철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1892	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Simplified paragenesis of ore minerals in the Hadong Fe-Ti-bearing ore body. Abbreviations: Cp=chalcopyrite, Py=pyrite, Sl=sphalerite.	미상	산소분압	Simplified paragenesis of ore minerals in the Hadong Fe-Ti-bearing ore body. Abbreviations: Cp=chalcopyrite, Py=pyrite, Sl=sphalerite.	하동-산청 회장암체 내 부존하는 하동 함철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1893	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	LogfO2(atm) versus LogfS2(atm) diagram showing the ore mineralization environments at 700oC, based on mineral assemblages. Ilmenite and rutile stability field shown stippled. Stability field and equilibrium boundaries using the data in Froese(1977).	미상	산소분압	LogfO2(atm) versus LogfS2(atm) diagram showing the ore mineralization environments at 700oC, based on mineral assemblages. Ilmenite and rutile stability field shown stippled. Stability field and equilibrium boundaries using the data in Froese(1977).	하동-산청 회장암체 내 부존하는 하동 함철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1894	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	LogfO2(atm) versus LogfS2(atm) diagram showing the ore mineralization environments at 600oC, based on mineral assemblages.	미상	산소분압	LogfO2(atm) versus LogfS2(atm) diagram showing the ore mineralization environments at 600oC, based on mineral assemblages.	하동-산청 회장암체 내 부존하는 하동 함철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1895	JC4-2-4/5/7/8/9/12, JH11-5-5, HD-4-6-2/4, C7-1-1/7/8	Representative chemical compositions(wt.%) of ilmenite in the Hadong Fe-Ti-bearing ore bodies	미상	산소분압	Representative chemical compositions(wt.%) of ilmenite in the Hadong Fe-Ti-bearing ore bodies	하동-산청 회장암체 내 부존하는 하동 함철-티탄 광체의 광화작용(자원환경지질 Econ_v50n1p035)	35.500000 127.750000; 35.500000 128.000000; 35.083333 128.000000; 35.083333 127.750000
1896	GP1/2	The crystallographic structures of serpentine-group minerals: (A) lizardite; (B) antigorite; (C) chrysotile. The triangles represent tetrahedral sheet and squares represent octahedral sheet (modified from Thomas and Midgley, 2004).	미상	XRD, EDS, PLM, EPMA	The crystallographic structures of serpentine-group minerals: (A) lizardite; (B) antigorite; (C) chrysotile. The triangles represent tetrahedral sheet and squares represent octahedral sheet (modified from Thomas and Midgley,	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1897	GP1/2	Geological map around Maon-ri, Guhang-myeon, Hongseong-gun, Chungnam, South Korea (modified from Lee and Kim, 1963).	미상	XRD, EDS, PLM, EPMA	Geological map around Maon-ri, Guhang-myeon, Hongseong-gun, Chungnam, South Korea (modified from Lee and Kim, 1963).	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1898	GP1/2	Geological map around Wigok-ri, Seorak-myeon, Gapyeong-gun, Gyeonggi, South Korea (modified from Lee et al., 1974).	미상	XRD, EDS, PLM, EPMA	Geological map around Wigok-ri, Seorak-myeon, Gapyeong-gun, Gyeonggi, South Korea (modified from	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1899	GP1/2	X-ray diffraction patterns of fibrous serpentine samples from Hongseong (A) and Gapyeong (B).	미상	XRD, EDS, PLM, EPMA	X-ray diffraction patterns of fibrous serpentine samples from Hongseong (A) and Gapyeong (B).	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1900	GP1/2	Central stop dispersion staining objective (DSO) images of fibrous chrysotile (A, B) and antigorite (C, D): fiber length direction (A, C) and fiber diameter direction (B, D).	미상	XRD, EDS, PLM, EPMA	Central stop dispersion staining objective (DSO) images of fibrous chrysotile (A, B) and antigorite (C, D): fiber length direction (A, C) and fiber diameter direction (B, D).	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1901	GP1/2	SEM-EDS analyses of fibrous serpentine minerals from study areas: SEM image and EDS spectrum of chrysotile (A, C), SEM image and EDS spectrum of antigorite (B, D).	미상	XRD, EDS, PLM, EPMA	SEM-EDS analyses of fibrous serpentine minerals from study areas: SEM image and EDS spectrum of chrysotile (A, C), SEM image and EDS spectrum of antigorite (B, D).	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1902	GP1/2	SEM-EDS analyses of non-fibrous serpentine minerals from study areas: SEM image and EDS spectrum of antigorite (A, C), SEM image and EDS spectrum of lizardite (B, D).	미상	XRD, EDS, PLM, EPMA	SEM-EDS analyses of non-fibrous serpentine minerals from study areas: SEM image and EDS spectrum of antigorite (A, C), SEM image and EDS spectrum of lizardite (B, D).	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1903	GP1/2	Photomicrographs of serpentinites from two study areas: Polarizing micrograph showing mesh texture of serpentinite (A), and arrow indicates fluid flow paths that infiltrate into the rock (B), olivines and pyroxene altered to serpentine in serpentinite (C, D) Mag = magnetite, Oli = olivine, Px = pyroxene, Ser = serpentine.	미상	XRD, EDS, PLM, EPMA	Photomicrographs of serpentinites from two study areas: Polarizing micrograph showing mesh texture of serpentinite (A), and arrow indicates fluid flow paths that infiltrate into the rock (B), olivines and pyroxene altered to serpentine in serpentinite (C, D) Mag = magnetite, Oli = olivine, Px = pyroxene, Ser =	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1904	GP1/2	SEM-EDS analyses and photomicrographs of serpentinites from two study areas: SEM images showing the fibrous minerals formed from layer-structure mineral (A, B); polarizing micrograph showing fibrous minerals and talc (C, D) Mag = magnetite, Ser = serpentine, Tc = Talc.	미상	XRD, EDS, PLM, EPMA	SEM-EDS analyses and photomicrographs of serpentinites from two study areas: SEM images showing the fibrous minerals formed from layer-structure mineral (A, B); polarizing micrograph showing fibrous minerals and talc (C, D) Mag = magnetite, Ser =	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1905	GP1/2	Mapping of O, Si, Mg, Al, and Fe by EPMA for serpentine specimen showing cross fiber (A-E) and slip fiber (F-J).	미상	XRD, EDS, PLM, EPMA	Mapping of O, Si, Mg, Al, and Fe by EPMA for serpentine specimen showing cross fiber (A-E) and slip fiber (F-J).	홍성과 가평 사문암 내에서 섬유상으로 산출되는 사문석군 광물의 종류 및 특성 (자원환경지질 Econ_v49n1p001)	36.565603 126.634422 37.668200 127.521156
1906	YM 51-2/518/517/367	Sample location and geological map of the Yeongam-Gangjin area modified after Choi and Yoon (1968), Chang and Kim (1967) and Kinosaki (1929). The inset shows major tectonic divisions of the Korean Peninsula. OMB=Ogcheon Metamorphic Belt; TB= Taebaeksan Basin; YM=Yeongnam Massif. SHRIMP U-Pb zircon age were obtained from the following sources: ① Kim et al., 2014, ② Ha, 2014. "?" : Inferred area of the Upper Paleozoic formation.	미상	SHRIMP	Sample location and geological map of the Yeongam-Gangjin area modified after Choi and Yoon (1968), Chang and Kim (1967) and Kinosaki (1929). The inset shows major tectonic divisions of the Korean Peninsula. OMB=Ogcheon Metamorphic Belt; TB= Taebaeksan Basin; YM=Yeongnam Massif. SHRIMP U-Pb zircon age were obtained from the following sources: ① Kim et al., 2014, ② Ha, 2014. "?" : Inferred area of the Upper Paleozoic formation.	영암-강진 일원 변성사질암의 SHRIMP U-Pb 저어콘 연대(자원환경지질 Econ_v48n4p287)	34.830783 126.630119; 34.830783 126.987267; 34.445211 126.987267; 34.445211 126.630119

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1907	YM 51-2/518/517/367	Photomicrograph of the metapsammite. (a) Quartz+chlorite+muscovite+biotite+epidote±alkali feldspar±titanite assemblages. (b) Quartz with mosaic texture. (c), (d) Chlorite and epidote occur as metamorphic minerals after replacement of biotite.	미상	SHRIMP	Photomicrograph of the metapsammite. (a) Quartz+chlorite+muscovite+biotite+epidote±alkali feldspar±titanite assemblages. (b) Quartz with mosaic texture. (c), (d) Chlorite and epidote occur as metamorphic minerals after replacement of biotite.	영암-강진 일원 변성사질암의 SHRIMP U-Pb 저어콘 연대(자원환경지질 Econ_v48n4p287)	34.830783 126.630119; 34.830783 126.987267; 34.445211 126.987267; 34.445211 126.630119
1908	YM 51-2/518/517/367	Cathodoluminescence images of selected zircon grains. Ellipse and values at each spot represent the locations for SHRIMP dating and ages(Ma). Scale bars are 100 µm.	미상	SHRIMP	Cathodoluminescence images of selected zircon grains. Ellipse and values at each spot represent the locations for SHRIMP dating and ages(Ma). Scale bars are 100 µm.	영암-강진 일원 변성사질암의 SHRIMP U-Pb 저어콘 연대(자원환경지질 Econ_v48n4p287)	34.830783 126.630119; 34.830783 126.987267; 34.445211 126.987267; 34.445211 126.630119
1909	YM 51-2/518/517/367	Tera-Wasserburg diagrams showing the spot analyses of zircon from (a) sample YM-518, (b) sample YM-517 and (c) sample YM-367.	미상	SHRIMP	Tera-Wasserburg diagrams showing the spot analyses of zircon from (a) sample YM-518, (b) sample YM-517 and (c) sample YM-367.	영암-강진 일원 변성사질암의 SHRIMP U-Pb 저어콘 연대(자원환경지질 Econ_v48n4p287)	34.830783 126.630119; 34.830783 126.987267; 34.445211 126.987267; 34.445211 126.630119
1910	YM 51-2/518/517/367	Stratigraphic correlation of the Pyeongan Group. Fm: Formation. 1: Lee et al.(1965), 2: Suh et al.(1985), 3: Kim et al.(2012), 4: Lee et al.(2012).	미상	SHRIMP	Stratigraphic correlation of the Pyeongan Group. Fm: Formation. 1: Lee et al.(1965), 2: Suh et al.(1985), 3: Kim et al.(2012), 4: Lee et al.(2012).	영암-강진 일원 변성사질암의 SHRIMP U-Pb 저어콘 연대(자원환경지질 Econ_v48n4p287)	34.830783 126.630119; 34.830783 126.987267; 34.445211 126.987267; 34.445211 126.630119
1911	YM 51-2/518/517/367	SHRIMP zircon U-Pb isotopic data for the metapsammite in the study area	미상	SHRIMP	SHRIMP zircon U-Pb isotopic data for the metapsammite in the study area	영암-강진 일원 변성사질암의 SHRIMP U-Pb 저어콘 연대(자원환경지질 Econ_v48n4p287)	34.830783 126.630119; 34.830783 126.987267; 34.445211 126.987267; 34.445211 126.630119
1912	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-3/8-9	Geologic map of the study area (modified from Youn and Park (1993)). Abbreviations: IB = Imjingang Belt, KM = Kyounggi Massif, OB = Ogcheon Belt, TB = Taebaegsan Basin, YM = Youngnam Massif, KB = Kyoungsang Basin	미상	EPMA, 황안정동위원소 분석	Geologic map of the study area (modified from Youn and Park (1993)). Abbreviations: IB = Imjingang Belt, KM = Kyounggi Massif, OB = Ogcheon Belt, TB = Taebaegsan Basin, YM = Youngnam Massif, KB = Kyoungsang	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1913	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-	Paragenetic sequence of minerals in the Seungryung deposit.	미상	EPMA, 황안정동위원소 분석	Paragenetic sequence of minerals in the Seungryung deposit.	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1914	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-3/8-9	Microphotographs of ore minerals from the Seungryung deposit. (A) Skarn ores consisting of garnet and pyroxene replaced by phlogopite and sphalerite. (B) Pyrite veinlet replacing skarn minerals. (C) Early pyrite replaced by late pyrite. (D) Magnetite replacing early pyrite. (E) Magnetite replaced by late pyrite. (F)-(G) Chalcopyrite disease showing bead chains and dusting texture in sphalerite. (H)-(I) Occurrence of Pb-Ag-Bi-S system minerals. Abbreviations = Px: pyroxene, Gt: garnet, Phl: phlogopite, Chl: chlorite, Py: pyrite, Sph: sphalerite, Mt: magnetite, Cp: chalcopyrite, Po: pyrrhotite, Pba: Pb-Ag-Bi-S system mineral.	미상	EPMA, 황안정동위원소 분석	Microphotographs of ore minerals from the Seungryung deposit. (A) Skarn ores consisting of garnet and pyroxene replaced by phlogopite and sphalerite. (B) Pyrite veinlet replacing skarn minerals. (C) Early pyrite replaced by late pyrite. (D) Magnetite replacing early pyrite. (E) Magnetite replaced by late pyrite. (F)-(G) Chalcopyrite disease showing bead chains and dusting texture in sphalerite. (H)-(I) Occurrence of Pb-Ag-Bi-S system minerals. Abbreviations = Px: pyroxene, Gt: garnet, Phl: phlogopite, Chl: chlorite, Py: pyrite, Sph: sphalerite, Mt: magnetite, Cp: chalcopyrite, Po: pyrrhotite, Pba: Pb-	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1915	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-	Ternary diagram showing the compositions of Pb-Ag-Bi-S system minerals from the Seungryung deposit.	미상	EPMA, 황안정동위원소 분석	Ternary diagram showing the compositions of Pb-Ag-Bi-S system minerals from the Seungryung deposit.	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1916	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-3/8-9	Sulfur isotope compositions of the Seungryung deposit compared with representative Pb-Zn deposits in the Taebaegsan mineralized zone and Au-Ag deposits close to study area.	미상	EPMA, 황안정동위원소 분석	Sulfur isotope compositions of the Seungryung deposit compared with representative Pb-Zn deposits in the Taebaegsan mineralized zone and Au-Ag deposits close to study area.	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1917	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-3/8-9	Ternary relationship of FeS, MnS and CdS contents for sphalerites from (A) representative Pb-Zn deposits in the Taebaegsan mineralized zone, (B) representative Au-Ag deposits, and (C) ore deposits around study area. Data from Chon and Shimazaki (1986), Kim et al. (1981), Park et al. (1988), So et al. (1992), Yoo et al. (2002), Lee et al. (1992), Youn (2008), and Youn and Park (1991, 1993).	미상	EPMA, 황안정동위원소 분석	Ternary relationship of FeS, MnS and CdS contents for sphalerites from (A) representative Pb-Zn deposits in the Taebaegsan mineralized zone, (B) representative Au-Ag deposits, and (C) ore deposits around study area. Data from Chon and Shimazaki (1986), Kim et al. (1981), Park et al. (1988), So et al. (1992), Yoo et al. (2002), Lee et al. (1992), Youn (2008), and Youn and Park	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1918	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-	Representative EPMA analyses of sphalerite from the Seungryung deposit	미상	EPMA, 황안정동위원소 분석	Representative EPMA analyses of sphalerite from the Seungryung deposit	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1919	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-	Representative EPMA analyses of magnetite from the Seungryung deposit	미상	EPMA, 황안정동위원소 분석	Representative EPMA analyses of magnetite from the Seungryung deposit	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1920	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-	Representative EPMA analyses of Pb-Ag-Bi-S system minerals from the Seungryung deposit	미상	EPMA, 황안정동위원소 분석	Representative EPMA analyses of Pb-Ag-Bi-S system minerals from the Seungryung deposit	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694
1921	SR5-1/5-2/6-1/7-3/7-5/8-3/8-4/8-7/8-8/8-11/8-12/6-	Sulfur isotope composition of sulfide minerals from the Seungryung deposit	미상	EPMA, 황안정동위원소 분석	Sulfur isotope composition of sulfide minerals from the Seungryung deposit	무주 승룡 아연광상의 광석광물과 생성환경(자원환경지질 Econ_v48n1p001)	35.998333 127.714694

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1922	R1~4	Geological map around the Daerori (modified from Korea Institute of Energy and Resources, 1982), Seosan, Chungnam Province, Korea.	미상	PLM, XRD, EPMA, EDS	Geological map around the Daerori (modified from Korea Institute of Energy and Resources, 1982), Seosan, Chungnam Province, Korea.	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1923	R1~4	A photograph and microphotographs of carbonate rock R1: (A) a photograph of a hand specimen, (B) a microphotograph showing fine texture of dolomite (Do) and amphibole (Amp) pseudomorph.	미상	PLM, XRD, EPMA, EDS	A photograph and microphotographs of carbonate rock R1: (A) a photograph of a hand specimen, (B) a microphotograph showing fine texture of dolomite (Do) and amphibole (Amp)	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1924	R1~4	A Photograph and a microphotograph of carbonate rock R2: (A) a photograph of a hand specimen, (B) a microphotograph showing large diopside crystal altered to secondary talc (Tc) and a large amphibole (Amp).	미상	PLM, XRD, EPMA, EDS	A Photograph and a microphotograph of carbonate rock R2: (A) a photograph of a hand specimen, (B) a microphotograph showing large diopside crystal altered to secondary talc (Tc) and a large amphibole (Amp).	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1925	R1~4	A photograph and a microphotograph of carbonate rock R3: (A) a photograph of a hand specimen and (B) a microphotograph showing medium texture of pseudomorph amphibole (Amp).	미상	PLM, XRD, EPMA, EDS	A photograph and a microphotograph of carbonate rock R3: (A) a photograph of a hand specimen and (B) a microphotograph showing medium texture of pseudomorph amphibole (Amp).	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1926	R1~4	A photograph and a microphotograph of carbonate rock R4: (A) a photograph of a hand specimen and (B) a microphotograph showing subhedral amphibole (Amp).	미상	PLM, XRD, EPMA, EDS	A photograph and a microphotograph of carbonate rock R4: (A) a photograph of a hand specimen and (B) a microphotograph showing subhedral amphibole (Amp).	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1927	R1~4	X-ray diffraction patterns of carbonate rock R1 and R2. (Ac = actinolite, Tc = talc, Tr = tremolite, Do = dolomite, Pyx = pyroxene, Qtz = Quartz)	미상	PLM, XRD, EPMA, EDS	X-ray diffraction patterns of carbonate rock R1 and R2. (Ac = actinolite, Tc = talc, Tr = tremolite, Do = dolomite, Pyx = pyroxene, Qtz = Quartz)	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1928	R1~4	X-ray diffraction patterns of carbonate rock R3 and R4. (Ac = actinolite, Tr = tremolite, Do = dolomite, Pyx = pyroxene, Qtz = Quartz)	미상	PLM, XRD, EPMA, EDS	X-ray diffraction patterns of carbonate rock R3 and R4. (Ac = actinolite, Tr = tremolite, Do = dolomite, Pyx = pyroxene, Qtz = Quartz)	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1929	R1~4	Polarizing micrographs and SEM-EDS analyses of carbonate rock R1 showing crystal habits of diopside (Di), dolomite (Do) and tremolite (Tr): (A) a polarizing micrograph showing coarse texture of calcsilicate minerals in R3-1, (B) scanning electron micrograph showing non-asbestiform tremolite in R1, (C) EDS spectrum of tremolite in R1, (D) a polarizing micrograph showing acicular crystals of tremolite in R2, (E) scanning electron micrograph showing asbestiform tremolite, and (F) EDS spectrum of tremolite.	미상	PLM, XRD, EPMA, EDS	Polarizing micrographs and SEM-EDS analyses of carbonate rock R1 showing crystal habits of diopside (Di), dolomite (Do) and tremolite (Tr): (A) a polarizing micrograph showing coarse texture of calcsilicate minerals in R3-1, (B) scanning electron micrograph showing non-asbestiform tremolite in R1, (C) EDS spectrum of tremolite in R1, (D) a polarizing micrograph showing acicular crystals of tremolite in R2, (E) scanning electron micrograph showing asbestiform tremolite, and (F) EDS spectrum of tremolite.	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1930	R1~4	Polarizing micrographs and SEM-EDS analyses of carbonate rock R3 and R4 showing crystal habits of tremolite (Tr) and diopside (Di): (A) polarizing micrograph showing cleavage of tremolite and pyroxene, (B) scanning electron micrograph showing non-asbestiform tremolite, (C) EDS spectrum of tremolite, (D) polarizing micrograph showing cleavage of tremolite, (E) scanning electron micrograph showing asbestiform tremolite on the surface of columnar crystal, and (F) EDS spectrum of tremolite.	미상	PLM, XRD, EPMA, EDS	Polarizing micrographs and SEM-EDS analyses of carbonate rock R3 and R4 showing crystal habits of tremolite (Tr) and diopside (Di): (A) polarizing micrograph showing cleavage of tremolite and pyroxene, (B) scanning electron micrograph showing non-asbestiform tremolite, (C) EDS spectrum of tremolite, (D) polarizing micrograph showing cleavage of tremolite, (E) scanning electron micrograph showing asbestiform tremolite on the surface of columnar crystal, and (F) EDS spectrum	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1931	R1~4	Back-scattered electron microscopy image of carbonate rock R1 showing prograde reaction textures of calcite (Cal), diopside (Di), dolomite (Do), and tremolite (Tr).	미상	PLM, XRD, EPMA, EDS	Back-scattered electron microscopy image of carbonate rock R1 showing prograde reaction textures of calcite (Cal), diopside (Di), dolomite (Do), and	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1932	R1~4	Back-scattered electron microscopy image of carbonate rock R2 showing texture of calcite (Cal), diopside (Di), talc (Tc), tremolite (Tr) and quartz (Qtz).	미상	PLM, XRD, EPMA, EDS	Back-scattered electron microscopy image of carbonate rock R2 showing texture of calcite (Cal), diopside (Di), talc (Tc), tremolite (Tr) and quartz (Qtz).	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1933	R1~4	Back-scattered electron microscopy image of carbonate rock R4 showing texture of diopside (Di), tremolite (Tr), and quartz (Qtz).	미상	PLM, XRD, EPMA, EDS	Back-scattered electron microscopy image of carbonate rock R4 showing texture of diopside (Di), tremolite (Tr), and quartz (Qtz).	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1934	R1~4	Representative analyses of amphiboles occurred in carbonate rock R1, R2, R3 and R4	미상	PLM, XRD, EPMA, EDS	Representative analyses of amphiboles occurred in carbonate rock R1, R2, R3 and R4	충남 서산 대로리 일대 자연발생석면의 광물학적 특성(자원환경지질 Econ_v47n5p467)	36.962078 126.399603; 36.962078 126.421586; 36.947164 126.421586; 36.947164 126.399603
1935	HN-26	Geologic map of the Haenam deposit (modified from KIGAM, 2002).	미상	EPMA, ICP-MS, ICP-AES, XRF	Geologic map of the Haenam deposit (modified from KIGAM, 2002).	해남 연-아연 스킨광상의 산상과 지하학적 특성(자원환경지질	34.752058 126.29025
1936	HN-26	Map showing exploited pit mouths and galleries in the Haenam deposit (modified from KORES, 1981).	미상	EPMA, ICP-MS, ICP-AES, XRF	Map showing exploited pit mouths and galleries in the Haenam deposit (modified from KORES, 1981).	해남 연-아연 스킨광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1937	HN-26	Representative hand specimen (HN-31) showing skarn zonation and its microscopic images of the Haenam deposit. (A) Rock slab image of zoned skarn. (B) Division of zoned skarn (zone 1: garnet±pyroxene±calcite±quartz, zone 2: pyroxene+garnet+quartz±calcite, zone 3: calcite+pyroxene±garnet, zone 4: quartz+calcite±pyroxene, zone 5: calcite±chlorite). (C) Garnet coexisting with pyroxene. (D) Quartz and calcite veinlet in garnet-pyroxene zone. (E) Garnet coexisting with pyroxene, and quartz filling in the space. (F) BSE image of zoned garnet. (G) Calcite and pyroxene coexisting with small garnet. (H) Calcite and pyroxene coexisting with sphalerite and galena. (I) Quartz and calcite coexisting with tiny pyroxene. (J) Microcrystalline quartz coexisting with calcite. (K) Chlorite vein and altered calcite. (L) Macrocrystalline calcite. Abbreviations = An: andradite, Gr: grossular, Chl: chlorite. Others are same as in Figure 3.	미상	EPMA, ICP-MS, ICP-AES, XRF	Representative hand specimen (HN-31) showing skarn zonation and its microscopic images of the Haenam deposit. (A) Rock slab image of zoned skarn. (B) Division of zoned skarn (zone 1: garnet±pyroxene±calcite±quartz, zone 2: pyroxene+garnet+quartz±calcite, zone 3: calcite+pyroxene±garnet, zone 4: quartz+calcite±pyroxene, zone 5: calcite±chlorite). (C) Garnet coexisting with pyroxene. (D) Quartz and calcite veinlet in garnet-pyroxene zone. (E) Garnet coexisting with pyroxene, and quartz filling in the space. (F) BSE image of zoned garnet. (G) Calcite and pyroxene coexisting with small garnet. (H) Calcite and pyroxene coexisting with sphalerite and galena. (I) Quartz and calcite coexisting with tiny pyroxene. (J) Microcrystalline quartz coexisting with calcite. (K) Chlorite vein and altered calcite. (L) Macrocrystalline calcite. Abbreviations = An: andradite, Gr: grossular, Chl: chlorite. Others are same as in Figure 3.	해남 연-아연 스킨광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1938	HN-26	Microphotographs of ore minerals from the Haenam deposit. (A) Chalcopryite coexisting with sphalerite and tiny inclusion of galena at garnet rich zone. (B) Chalcopryite coexisting with sphalerite and pyrite at garnet rich zone. (C) Sphalerite and galena at pyroxene rich zone. (D) Chalcopryite exsolution in sphalerite coexisting with pyrite at pyroxene rich zone. (E) Galena and sphalerite at pyroxene+calcite rich zone. (F) Galena and sphalerite coexisting with pyrite at pyroxene+calcite rich zone. Abbreviations = Py: pyrite. Others are same as in Figure 3 & 4.	미상	EPMA, ICP-MS, ICP-AES, XRF	Microphotographs of ore minerals from the Haenam deposit. (A) Chalcopryite coexisting with sphalerite and tiny inclusion of galena at garnet rich zone. (B) Chalcopryite coexisting with sphalerite and pyrite at garnet rich zone. (C) Sphalerite and galena at pyroxene rich zone. (D) Chalcopryite exsolution in sphalerite coexisting with pyrite at pyroxene rich zone. (E) Galena and sphalerite at pyroxene+calcite rich zone. (F) Galena and sphalerite coexisting with pyrite at pyroxene+calcite rich zone. Abbreviations = Py: pyrite. Others are same as in Figure 3 & 4.	해남 연-아연 스킨광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1939	HN-26	Paragenetic sequence of mineralization at the Haenam deposit.	미상	EPMA, ICP-MS, ICP-AES, XRF	Paragenetic sequence of mineralization at the Haenam deposit.	해남 연-아연 스킨광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1940	HN-26	Composition of skarn minerals from the Haenam deposit. (A) Plot of pyroxene on johansenite-diopside-hedenbergite triangle. (B) Plot of garnet on spessartine+almandine+pyrope-grossular-andradite triangle.	미상	EPMA, ICP-MS, ICP-AES, XRF	Composition of skarn minerals from the Haenam deposit. (A) Plot of pyroxene on johansenite-diopside-hedenbergite triangle. (B) Plot of garnet on spessartine+almandine+pyrope-grossular-andradite triangle.	해남 연-아연 스킨광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1941	HN-26	Relationship of components in ore minerals. (A) Ternary relationship of FeS, MnS*10 and CdS*10 contents in sphalerite. (B) Relationship between Ag and Bi contents in galena.	미상	EPMA, ICP-MS, ICP-AES, XRF	Relationship of components in ore minerals. (A) Ternary relationship of FeS, MnS*10 and CdS*10 contents in sphalerite. (B) Relationship between Ag and Bi contents in galena.	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1942	HN-26	Schematic cross section showing skarn zonation and ore body at an intrusive contact with limestone in the Haenam deposit.	미상	EPMA, ICP-MS, ICP-AES, XRF	Schematic cross section showing skarn zonation and ore body at an intrusive contact with limestone in the Haenam deposit.	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1943	HN-26	Classification of igneous rocks associated with various types of skarn deposits (after Meinert, 1995) and quartz porphyry from this study. (A) Alkali-silica diagram showing the boundary between alkaline and subalkaline. (B) AFM diagram showing the boundary between calc-alkaline series and tholeiitic series (after Kuno, 1968; Irvine and Baragar, 1971). (C) Aluminum saturation diagram dividing metaluminous and peraluminous.	미상	EPMA, ICP-MS, ICP-AES, XRF	Classification of igneous rocks associated with various types of skarn deposits (after Meinert, 1995) and quartz porphyry from this study. (A) Alkali-silica diagram showing the boundary between alkaline and subalkaline. (B) AFM diagram showing the boundary between calc-alkaline series and tholeiitic series (after Kuno, 1968; Irvine and Baragar, 1971). (C) Aluminum saturation diagram dividing	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1944	HN-26	Harker variation diagrams of igneous rocks associated with various types of skarn deposit (Meinert, 1995) and quartz porphyry from this study.	미상	EPMA, ICP-MS, ICP-AES, XRF	Harker variation diagrams of igneous rocks associated with various types of skarn deposit (Meinert, 1995) and quartz porphyry from this study.	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1945	HN-26	Trace element contents of igneous rocks associated with various types of skarn deposit (Meinert, 1995) and quartz porphyry from this study.	미상	EPMA, ICP-MS, ICP-AES, XRF	Trace element contents of igneous rocks associated with various types of skarn deposit (Meinert, 1995) and quartz porphyry from this study.	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1946	HN-26	Tectonic discrimination of igneous rocks associated with various types of skarn deposits (Meinert, 1995) and quartz porphyry from this study. Abbreviations = OR: ocean ridge, Syn-COL: syncollision, VA: volcanic arc, WP: within-plate.	미상	EPMA, ICP-MS, ICP-AES, XRF	Tectonic discrimination of igneous rocks associated with various types of skarn deposits (Meinert, 1995) and quartz porphyry from this study. Abbreviations = OR: ocean ridge, Syn-COL: syncollision, VA: volcanic arc, WP:	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1947	HN-26	Rare earth elements patterns of quartz porphyry, limestone, and skarn from the Haenam deposit.	미상	EPMA, ICP-MS, ICP-AES, XRF	Rare earth elements patterns of quartz porphyry, limestone, and skarn from the Haenam deposit.	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1948	HN-26	K-Ar age of quartz porphyry from the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	K-Ar age of quartz porphyry from the Haenam deposit	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1949	HN-26	Electron Microprobe analyses of garnet from the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	Electron Microprobe analyses of garnet from the Haenam deposit	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1950	HN-26	Electron Microprobe analyses of pyroxene from the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	Electron Microprobe analyses of pyroxene from the Haenam deposit	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1951	HN-26	Electron Microprobe analyses of sphalerite from the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	Electron Microprobe analyses of sphalerite from the Haenam deposit	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1952	HN-26	Electron Microprobe analyses of galena from the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	Electron Microprobe analyses of galena from the Haenam deposit	해남 연-아연 스키르광상의 산상과 지하학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1953	HN-26	Major and trace elements concentrations of quartz porphyry, limestone, and skarn from the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	Major and trace elements concentrations of quartz porphyry, limestone, and skarn from the Haenam deposit	해남 연-아연 스카른광상의 산상과 지화학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1954	HN-26	Fe, Mn, and Cd contents in sphalerite from representative Pb-Zn and Au-Ag deposits in Korea and the Haenam deposit	미상	EPMA, ICP-MS, ICP-AES, XRF	Fe, Mn, and Cd contents in sphalerite from representative Pb-Zn and Au-Ag deposits in Korea and the Haenam deposit	해남 연-아연 스카른광상의 산상과 지화학적 특성(자원환경지질 Econ_v47n4p363)	34.752058 126.29025
1955	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Microphotographs of representative skarns in the Pocheon deposit. A-B. Sodic-calcic skarn showing early acmite (Acm)-albite (Ab) assemblages overprinted by magnetite (Mt) dendrites which are infilled by late anhydrite, quartz, and calcite (Cal). C. A Fe ore showing maghemite (Mh) infilled by magnetite (Mt) and partly replaced by hematite (Hm). D. A Fe-Cu ore showing euhedral magnetite (Mt) and tremolite (Tm) infilled by chalcopyrite (Cpy). E. Retrograde skarn showing phlogopite (Phl) closely infilled by magnetite (Mt). F. Retrograde skarn assemblages with magnetite (Mt) and tremolite (Tm). G. Magnesian skarn showing olivine (Ol)-clinopyroxene (Cpx) assemblages partly replaced by serpentine (Srp). H. Typical calcic skarn with garnet (Grt) and clinopyroxene (Cpx) infilled by chalcopyrite (Cpy).	미상	EPMA	Microphotographs of representative skarns in the Pocheon deposit. A-B. Sodic-calcic skarn showing early acmite (Acm)-albite (Ab) assemblages overprinted by magnetite (Mt) dendrites which are infilled by late anhydrite, quartz, and calcite (Cal). C. A Fe ore showing maghemite (Mh) infilled by magnetite (Mt) and partly replaced by hematite (Hm). D. A Fe-Cu ore showing euhedral magnetite (Mt) and tremolite (Tm) infilled by chalcopyrite (Cpy). E. Retrograde skarn showing phlogopite (Phl) closely infilled by magnetite (Mt). F. Retrograde skarn assemblages with magnetite (Mt) and tremolite (Tm). G. Magnesian skarn showing olivine (Ol)-clinopyroxene (Cpx) assemblages partly replaced by serpentine (Srp). H. Typical calcic skarn with garnet (Grt) and clinopyroxene (Cpx) infilled by	한국 포천 광상의 스카른 진화과정 및 철(-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1956	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Simplified paragenetic sequence of the magnesian, calcic, and sodic-calcic skarns in the Pocheon deposit.	미상	EPMA	Simplified paragenetic sequence of the magnesian, calcic, and sodic-calcic skarns in the Pocheon deposit.	한국 포천 광상의 스카른 진화과정 및 철(-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1957	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Composition of clinopyroxenes, garnets, olivines, and feldspars. A. Q-J diagram showing the composition of diverse clinopyroxenes from sodic-calcic skarns. Acm-Di-Hd diagram for the clinopyroxenes from sodic-calcic skarns. Jo-Di-Hd diagram for the clinopyroxenes from calcic and magnesian skarns. B. (Sps+Alm)-Grs-Adr diagram for the garnets from sodic-calcic and calcic skarns. C. Te-Fo-Fa diagram for the olivines from magnesian skarns and Or- Ab-An diagram for the feldspars from some host rocks and diverse skarns. Ab=albite, Acm=acmite, Adr=andradite, Alm=almandine, An=anorthite, Di=diopside, Fa=fayalite, Fo=fosterite, Grs=grossular, Hd=hedenbergite, J=2Na, Jo=johannsenite, Or=orthoclase, Q=Ca+Mg+Fe ²⁺ , Sps=spessartine, and Te=tephroite.	미상	EPMA	Composition of clinopyroxenes, garnets, olivines, and feldspars. A. Q-J diagram showing the composition of diverse clinopyroxenes from sodic-calcic skarns. Acm-Di-Hd diagram for the clinopyroxenes from sodic-calcic skarns. Jo-Di-Hd diagram for the clinopyroxenes from calcic and magnesian skarns. B. (Sps+Alm)-Grs-Adr diagram for the garnets from sodic-calcic and calcic skarns. C. Te-Fo-Fa diagram for the olivines from magnesian skarns and Or- Ab-An diagram for the feldspars from some host rocks and diverse skarns. Ab=albite, Acm=acmite, Adr=andradite, Alm=almandine, An=anorthite, Di=diopside, Fa=fayalite, Fo=fosterite, Grs=grossular, Hd=hedenbergite, J=2Na, Jo=johannsenite, Or=orthoclase, Q=Ca+Mg+Fe ²⁺ , Sps=spessartine, and Te=tephroite.	한국 포천 광상의 스카른 진화과정 및 철(-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1958	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Composition of amphiboles and micas. A. TSi-Mg/(Mg+Fe) diagram for the amphiboles from calcic skarn, sodic-calcic skarn, altered mylonite, and iron ore (Leake et al., 1997). B. Mg/(Mg+Fe)-AlIV diagram for the micas from sodic-calcic skarn.	미상	EPMA	Composition of amphiboles and micas. A. TSi-Mg/(Mg+Fe) diagram for the amphiboles from calcic skarn, sodic-calcic skarn, altered mylonite, and iron ore (Leake et al., 1997). B. Mg/(Mg+Fe)-AlIV diagram for the micas from sodic-calcic skarn.	한국 포천 광상의 스카른 진화과정 및 철(-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1959	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Xadr-Xhd diagram illustrating relative oxidation states of calcic skarns and sodic-calcic skarns. Data points represent averages of clinopyroxene and garnet compositions.	미상	EPMA	Xadr-Xhd diagram illustrating relative oxidation states of calcic skarns and sodic-calcic skarns. Data points represent averages of clinopyroxene and garnet compositions.	한국 포천 광상의 스카른 진화과정 및 철(-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1960	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Microphotograph of fluid inclusion (A) in diopside and qualitative data (B) by EPMA for observed solid phase inclusions in type-III inclusion.	미상	EPMA	Microphotograph of fluid inclusion (A) in diopside and qualitative data (B) by EPMA for observed solid phase inclusions in type-III inclusion.	한국 포천 광상의 스카른 진화과정 및 철(-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1961	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Temperature-XCO ₂ diagrams illustrating the schematic evolutionary path of the ore bearing fluids during prograde (I) and retrograde (II) skarnification for the calcic skarns (A) and magnesian skarns (B) at 0.5 kbar fluid pressure in the Pocheon deposit (modified after Meinert, 1982; Harris and Einaudi, 1982). Calc-silicate equilibria based on the experimental work of Gordon and Greenwood (1971), Greenwood (1967), Slaughter et al. (1975), and Newton (1966). Act=actinolite, Brc=brucite, Mgs=magnesite, Per=periclase, Sa=salite. See Table 1 and Figure 4 for other mineral abbreviations.	미상	EPMA	Temperature-XCO ₂ diagrams illustrating the schematic evolutionary path of the ore bearing fluids during prograde (I) and retrograde (II) skarnification for the calcic skarns (A) and magnesian skarns (B) at 0.5 kbar fluid pressure in the Pocheon deposit (modified after Meinert, 1982; Harris and Einaudi, 1982). Calc-silicate equilibria based on the experimental work of Gordon and Greenwood (1971), Greenwood (1967), Slaughter et al. (1975), and Newton (1966). Act=actinolite, Brc=brucite, Mgs=magnesite, Per=periclase, Sa=salite. See Table 1 and Figure 4 for	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1962	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Temperature-LogfO ₂ (A) and LogfO ₂ -LogfS ₂ (B) diagrams illustrating the stability relations of minerals during prograde (I) skarnification for the sodic-calcic skarns at 0.5 kbar fluid pressure and XCO ₂ =0.1 in the Pocheon deposit (base from Bowman, 1998) Po=pyrrhotite, Py=pyrite, Sd=siderite. See Table 1 and Figure 4 for other mineral abbreviations.	미상	EPMA	Temperature-LogfO ₂ (A) and LogfO ₂ -LogfS ₂ (B) diagrams illustrating the stability relations of minerals during prograde (I) skarnification for the sodic-calcic skarns at 0.5 kbar fluid pressure and XCO ₂ =0.1 in the Pocheon deposit (base from Bowman, 1998) Po=pyrrhotite, Py=pyrite, Sd=siderite. See Table 1 and Figure 4 for other	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1963	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Schematic model depicting the spacial and temporal episodes of hydrothermal activity, magmatism and crustal evolution. Note that skarnification and mineralization reflects both structural and lithological controls with the Late Cretaceous magmatism.	미상	EPMA	Schematic model depicting the spacial and temporal episodes of hydrothermal activity, magmatism and crustal evolution. Note that skarnification and mineralization reflects both structural and lithological controls with the Late Cretaceous magmatism.	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1964	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Mineral association and frequency of the magnesian, calcic, and sodic-calcic skarns in the Pocheon deposit	미상	EPMA	Mineral association and frequency of the magnesian, calcic, and sodic-calcic skarns in the Pocheon deposit	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1965	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Representative chemical composition of clinopyroxenes and garnets in the Pocheon magnesian, calcic, and sodic-calcic skarns	미상	EPMA	Representative chemical composition of clinopyroxenes and garnets in the Pocheon magnesian, calcic, and sodic-calcic skarns	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1966	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Representative chemical composition of olivines, amphiboles, phlogopites, and feldspars in the Pocheon magnesian, calcic, and sodic-calcic skarns	미상	EPMA	Representative chemical composition of olivines, amphiboles, phlogopites, and feldspars in the Pocheon magnesian, calcic, and sodic-calcic skarns	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1967	1001-23/30/25/12/14/37/26B/32, 1103-2/30	Comparison of average values (mole %) of clinopyroxenes and garnets in the sodic-calcic, calcic, and magnesian skarns	미상	EPMA	Comparison of average values (mole %) of clinopyroxenes and garnets in the sodic-calcic, calcic, and magnesian skarns	한국 포천 광상의 스카른 진화과정 및 철 (-동)광화작용(자원환경지질 Econ_v47n4p335)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844

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1968	PC2506/1305/1001/1101	Generalized geologic map of the Pocheon district, South Korea. Modified from Hwang and Kihm (2007).	미상	ICP-OES, ICP-MS	Generalized geologic map of the Pocheon district, South Korea. Modified from Hwang and Kihm (2007).	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1969	PC2506/1305/1001/1101	Schematic logging profile for the drill no. PC-2010-1 with photographs, showing typical relationships between some host rocks and various skarns. See mineral abbreviations used in Table 3.	미상	ICP-OES, ICP-MS	Schematic logging profile for the drill no. PC-2010-1 with photographs, showing typical relationships between some host rocks and various skarns. See mineral abbreviations used in Table 3.	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1970	PC2506/1305/1001/1101	A. (Na ₂ O+K ₂ O) versus SiO ₂ ; B. A/NK versus A/CNK (molar); C. K ₂ O versus SiO ₂ ; D. Rb versus (Y+Nb); E. K/Rb versus SiO ₂ ; F. (FeO+Fe ₂ O ₃ +CaO+Na ₂ O)/K ₂ O versus SiO ₂ , showing variation diagrams of typical major and trace components for the Jurassic and Cretaceous granitoids at the Pocheon district. Rb-(Y+Nb) diagram showing fields for different granite types from Pearce et al. (1984). A/NK=Al ₂ O ₃ /(Na ₂ O+K ₂ O); A/CNK=Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O); Syn-COLG=syn-collisional granite; WPG= within plate granite, VAG=volcanic arc granite, ORG=orogenic granite.	미상	ICP-OES, ICP-MS	A. (Na ₂ O+K ₂ O) versus SiO ₂ ; B. A/NK versus A/CNK (molar); C. K ₂ O versus SiO ₂ ; D. Rb versus (Y+Nb); E. K/Rb versus SiO ₂ ; F. (FeO+Fe ₂ O ₃ +CaO+Na ₂ O)/K ₂ O versus SiO ₂ , showing variation diagrams of typical major and trace components for the Jurassic and Cretaceous granitoids at the Pocheon district. Rb-(Y+Nb) diagram showing fields for different granite types from Pearce et al. (1984). A/NK=Al ₂ O ₃ /(Na ₂ O+K ₂ O); A/CNK=Al ₂ O ₃ /(CaO+Na ₂ O+K ₂ O); Syn-COLG=syn-collisional granite; WPG= within plate granite, VAG=volcanic arc	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1971	PC2506/1305/1001/1101	Chondrite-normalized whole-rock rare earth element (REE) patterns for the Jurassic and Cretaceous granitoids from the Pocheon district, presented in Table 1. C1 chondrite REE normalization values are from McDonough and Sun (1995).	미상	ICP-OES, ICP-MS	Chondrite-normalized whole-rock rare earth element (REE) patterns for the Jurassic and Cretaceous granitoids from the Pocheon district, presented in Table 1. C1 chondrite REE normalization values are from McDonough and Sun (1995).	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1972	PC2506/1305/1001/1101	Phlogopite 40Ar/39Ar age spectra and isochron plot from the Pocheon skarns. A. Age spectrum of cumulative percent 39Ar released versus apparent age. B. isotope correlation plot. WMPA = weighted mean plateau age; TFA = total fusion age. The age error bars for each temperature steps are at the 1σ level.	미상	ICP-OES, ICP-MS	Phlogopite 40Ar/39Ar age spectra and isochron plot from the Pocheon skarns. A. Age spectrum of cumulative percent 39Ar released versus apparent age. B. isotope correlation plot. WMPA = weighted mean plateau age; TFA = total fusion age. The age error bars for each temperature steps are at the 1σ level.	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1973	PC2506/1305/1001/1101	Age frequency of the various intrusive rocks and iron mineralization in the Pocheon district.	미상	ICP-OES, ICP-MS	Age frequency of the various intrusive rocks and iron mineralization in the Pocheon district.	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1974	PC2506/1305/1001/1101	Whole-rock Ca-Mg-Fe diagram (mole proportion) for the Pocheon carbonate rocks, skarns and iron ores, showing the most common mineral assemblages during skarn formation. See mineral abbreviations used in Table 3.	미상	ICP-OES, ICP-MS	Whole-rock Ca-Mg-Fe diagram (mole proportion) for the Pocheon carbonate rocks, skarns and iron ores, showing the most common mineral assemblages during skarn formation. See mineral abbreviations used in Table 3.	한국 포천 철(-동) 스카른 광상의 지질, 광 화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844

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1975	PC2506/1305/1001/1101	Major element oxide diagrams illustrating the effects of various skarn styles for the Pocheon marble protoliths with interpreted iron mineralization trends.	미상	ICP-OES, ICP-MS	Major element oxide diagrams illustrating the effects of various skarn styles for the Pocheon marble protoliths with interpreted iron mineralization	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1976	PC2506/1305/1001/1101	Chondrite-normalized, whole-rock rare earth element (REE) patterns for the Pocheon magnesian, calcic and sodic-calcic skarns, and iron ores presented in Tables 4 and 5. Shaded area is range of REE contents for the sodic-calcic skarn. C1 chondrite REE normalization values are from McDonough and Sun (1995).	미상	ICP-OES, ICP-MS	Chondrite-normalized, whole-rock rare earth element (REE) patterns for the Pocheon magnesian, calcic and sodic-calcic skarns, and iron ores presented in Tables 4 and 5. Shaded area is range of REE contents for the sodic-calcic skarn. C1 chondrite REE normalization values are from McDonough and Sun (1995).	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1977	PC2506/1305/1001/1101	Water-rock interaction model of both the Pocheon marble protoliths (dash curve) and marine limestone (continuous curve) to form magnesian, calcic and sodic-calcic skarns, and iron ores. Fluid/rock ratios (values given on the curves) for open-system condition are shown on the infiltration curve for XCO ₂ =0.1. Boxes outlining the δ ¹³ C- δ ¹⁸ O fields for marine limestone and igneous calcite are from Bowman (1998).	미상	ICP-OES, ICP-MS	Water-rock interaction model of both the Pocheon marble protoliths (dash curve) and marine limestone (continuous curve) to form magnesian, calcic and sodic-calcic skarns, and iron ores. Fluid/rock ratios (values given on the curves) for open-system condition are shown on the infiltration curve for XCO ₂ =0.1. Boxes outlining the δ ¹³ C- δ ¹⁸ O fields for marine limestone and igneous calcite are from Bowman (1998).	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1978	PC2506/1305/1001/1101	Bulk chemical analyses of intrusive rocks in the Pocheon area	미상	ICP-OES, ICP-MS	Bulk chemical analyses of intrusive rocks in the Pocheon area	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1979	PC2506/1305/1001/1101	K-Ar and Ar-Ar age data of phlogopites from magnesian skarn in the Pocheon deposit	미상	ICP-OES, ICP-MS	K-Ar and Ar-Ar age data of phlogopites from magnesian skarn in the Pocheon deposit	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1980	PC2506/1305/1001/1101	Representative mineral associations of various skarn types in the Pocheon deposit	미상	ICP-OES, ICP-MS	Representative mineral associations of various skarn types in the Pocheon deposit	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1981	PC2506/1305/1001/1101	Representative chemical composition of carbonate protolith from the Pocheon deposit	미상	ICP-OES, ICP-MS	Representative chemical composition of carbonate protolith from the Pocheon deposit	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1982	PC2506/1305/1001/1101	Bulk chemical analyses of various skarns and iron ores from the Pocheon deposit	미상	ICP-OES, ICP-MS	Bulk chemical analyses of various skarns and iron ores from the Pocheon deposit	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1983	PC2506/1305/1001/1101	Oxygen and carbon isotope analyses of carbonates from the Pocheon deposit	미상	ICP-OES, ICP-MS	Oxygen and carbon isotope analyses of carbonates from the Pocheon deposit	한국 포천 철(-동) 스카른 광상의 지질, 광화작용 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844

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1984	PC2506/1305/1001/1101	Sulfur isotope data of sulfides and sulfates from the Pocheon deposit	미상	ICP-OES, ICP-MS	Sulfur isotope data of sulfides and sulfates from the Pocheon deposit	한국 포천 철(-동) 스카른 광상의 지질, 광화학 및 생성연대(자원환경지질 Econ_v47n4p317)	38.157178 127.106844; 38.157178 127.333231; 37.751519 127.333231; 37.751519 127.106844
1985	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	Distribution of Triassic plutons in the Korean peninsula. NM, Nanglim massif; PB, Pyeongnam basin; IB, Imjingang belt; GM, Gyeonggi massif; OB, Okcheon belt; YM, Yeongnam massif; GB, Gyeongsang basin. SHRIMP zircon U-Pb zircon ages for Triassic plutons were obtained from the following sources: Kee et al.(2006); Lee et al.(2006); Peng et al.(2008); Cho et al.(2008); Choi et al.(2009); Williams et al. (2009); Seo et al.(2010); Kee et al.(2011); Song et al.(2011); Kihm and Hwang(2011); S.W. Kim et al.(2011); J. Kim et al.(2011); Kim et al.(2012); Song et al.(2013); this study.	미상	SHRIMP, SEM	Distribution of Triassic plutons in the Korean peninsula. NM, Nanglim massif; PB, Pyeongnam basin; IB, Imjingang belt; GM, Gyeonggi massif; OB, Okcheon belt; YM, Yeongnam massif; GB, Gyeongsang basin. SHRIMP zircon U-Pb zircon ages for Triassic plutons were obtained from the following sources: Kee et al.(2006); Lee et al.(2006); Peng et al.(2008); Cho et al.(2008); Choi et al.(2009); Williams et al. (2009); Seo et al.(2010); Kee et al.(2011); Song et al.(2011); Kihm and Hwang(2011); S.W. Kim et al.(2011); J. Kim et al.(2011); Kim et al.(2012); Song et al.(2013); this study.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1986	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	Geological map and sample location of the studied Triassic plutons from the central part of the Wolhyeonri complex in the Hongseong area.	미상	SHRIMP, SEM	Geological map and sample location of the studied Triassic plutons from the central part of the Wolhyeonri complex in the Hongseong area.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1987	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	Photomicrograph from Triassic monzonite-aplite plutons with minor leucocratic granite, syenite, monzodiorite and mafic intrusives: (a)-(c) monzonite showing porphyritic texture, (d) aplite showing hypidiomorphic-granular texture, (e) foliated syenite and (f)-(g) monzodiorite and mafic intrusives showing allotriomorphic-granular texture. Amp, amphibole: Bt, biotite; Qtz, quartz; Pl, plagioclase; Px, pyroxene; Kfs, K-feldspar.	미상	SHRIMP, SEM	Photomicrograph from Triassic monzonite-aplite plutons with minor leucocratic granite, syenite, monzodiorite and mafic intrusives: (a)-(c) monzonite showing porphyritic texture, (d) aplite showing hypidiomorphic-granular texture, (e) foliated syenite and (f)-(g) monzodiorite and mafic intrusives showing allotriomorphic-granular texture. Amp, amphibole: Bt, biotite; Qtz, quartz; Pl, plagioclase; Px, pyroxene; Kfs, K-feldspar.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1988	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	SEM cathodoluminescence (CL) images of sectioned zircon grains for the Triassic plutons from the central part of the Wolhyeonri complex. Numbered spots are locations of representative SHRIMP analysis.	미상	SHRIMP, SEM	SEM cathodoluminescence (CL) images of sectioned zircon grains for the Triassic plutons from the central part of the Wolhyeonri complex. Numbered spots are locations of representative SHRIMP analysis.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1989	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	Concordia plots of SHRIMP U-Pb isotopic analyses of zircon for the Triassic plutons from the central part of the Wolhyeonri complex. Numbered spots are locations of representative SHRIMP analysis.	미상	SHRIMP, SEM	Concordia plots of SHRIMP U-Pb isotopic analyses of zircon for the Triassic plutons from the central part of the Wolhyeonri complex. Numbered spots are locations of representative SHRIMP analysis.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1990	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	(a) Normative quartz-orthoclase-plagioclase composition diagram (after Streckeisen, 1976) and (b) K ₂ O-SiO ₂ diagram for the Triassic plutons from the central part of the Wolhyeonri complex.	미상	SHRIMP, SEM	(a) Normative quartz-orthoclase-plagioclase composition diagram (after Streckeisen, 1976) and (b) K ₂ O-SiO ₂ diagram for the Triassic plutons from the central part of the Wolhyeonri complex.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1991	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	(a) Chondrite-normalized rare earth element (REE) patterns and (b) primitive mantle-normalized trace element distribution diagrams (Sun and McDonough 1989) for the Triassic plutons from the central part of the Wolhyeonri complex. The symbols as in Fig. 7.	미상	SHRIMP, SEM	(a) Chondrite-normalized rare earth element (REE) patterns and (b) primitive mantle-normalized trace element distribution diagrams (Sun and McDonough 1989) for the Triassic plutons from the central part of the Wolhyeonri complex. The symbols as in	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1992	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	(a) Rb/(Y + Nb) (Pearce et al., 1984; Pearce, 1996) and (b) Rb-Hf-Ta (Harris et al., 1986) for the Triassic plutons from the central part of the Wolhyeonri complex. The symbols as in Fig. 7.	미상	SHRIMP, SEM	(a) Rb/(Y + Nb) (Pearce et al., 1984; Pearce, 1996) and (b) Rb-Hf-Ta (Harris et al., 1986) for the Triassic plutons from the central part of the Wolhyeonri complex. The symbols as in Fig. 7.	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1993	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	SHRIMP U-Pb data of zircons from Late Triassic plutons from the study area	미상	SHRIMP, SEM	SHRIMP U-Pb data of zircons from Late Triassic plutons from the study area	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1994	130326-807A, 130313-A1, 120604-9, 120601-5, 120531-4, 120605-6, 130313-A6, 130313-A8-2, 120604-10	Major and trace element analyses of plutonic rocks in the Wolhyeonri complex in the Hongseong area	미상	SHRIMP, SEM	Major and trace element analyses of plutonic rocks in the Wolhyeonri complex in the Hongseong area	홍성지역 월현리 복합체 내에 분포하는 트라이아스기 심성암류의 지질연대학 및 지구화학적 연구(자원환경지질 Econ_v46n5p391)	36.639139 126.434336; 36.639139 126.936822; 36.261100 126.936822; 36.261100 126.434336
1995	DH1/2/3	Generalized geological map of the Daehyun gold-silver deposit(modified from So and Yun, 1992).	미상	PIMA, XRD, EPMA, ICP-MS, XRF	Generalized geological map of the Daehyun gold-silver deposit(modified from So and Yun, 1992).	대현 금-은광상의 모암변질에 따른 원소 분산(자원환경지질 Econ_v46n2p199)	36.982244 128.167656; 36.982244 128.184644; 36.964044 128.184644; 36.964044 128.167656
1996	DH1/2/3	Photograph of ore vein, wallrock alteration and wallrock slab sample from the Daehyun gold-silver deposit. Numbers of (1) and (3) mean points sampled for geochemical analysis. Circles of (A) and (E) mean points of PIMA analysis. Abbreviations: Asp=arsenopyrite, Gn=galena, Py=pyrite, Qtz=quartz, Sp=sphalerite.	미상	PIMA, XRD, EPMA, ICP-MS, XRF	Photograph of ore vein, wallrock alteration and wallrock slab sample from the Daehyun gold-silver deposit. Numbers of (1) and (3) mean points sampled for geochemical analysis. Circles of (A) and (E) mean points of PIMA analysis. Abbreviations: Asp=arsenopyrite, Gn=galena, Py=pyrite, Qtz=quartz, Sp=sphalerite.	대현 금-은광상의 모암변질에 따른 원소 분산(자원환경지질 Econ_v46n2p199)	36.982244 128.167656; 36.982244 128.184644; 36.964044 128.184644; 36.964044 128.167656
1997	DH1/2/3	Gains and losses of major (wt.%), trace and rare earth elements (ppm) of the calcitic marble from the Daehyun Au-Ag deposit	미상	PIMA, XRD, EPMA, ICP-MS, XRF	Gains and losses of major (wt.%), trace and rare earth elements (ppm) of the calcitic marble from the Daehyun Au-Ag deposit	대현 금-은광상의 모암변질에 따른 원소 분산(자원환경지질 Econ_v46n2p199)	36.982244 128.167656; 36.982244 128.184644; 36.964044 128.184644; 36.964044 128.167656

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
1998	JJ06-01~05, OC08-01~04	Geological map of the study area. A) and B) mean mining sites.	미상	PLM, XRD, SEM	Geological map of the study area. A) and B) mean mining sites.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
1999	JJ06-01~05, OC08-01~04	Photographs of the Ocheon area and asbestos occurrences. A) for a complete view adjacent to the mine area, B) for a pool used during the mining, C) for adjacent Mesozoic Nampo sedimenary group, D) for weathered surface of a dolomitic rock, E) for a dolomitic rock showing a hydrothermal alteration, F) for a rock fragment showing tremolite asbestos.	미상	PLM, XRD, SEM	Photographs of the Ocheon area and asbestos occurrences. A) for a complete view adjacent to the mine area, B) for a pool used during the mining, C) for adjacent Mesozoic Nampo sedimenary group, D) for weathered surface of a dolomitic rock, E) for a dolomitic rock showing a hydrothermal alteration, F) for a rock fragment showing tremolite asbestos.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2000	JJ06-01~05, OC08-01~04	Photomicrographs of serpentinites from the Jeongjeon area. A) for a typical serpentinite showing serpentines rimmed by magnetites, B) for a peridotite containing olivine, orthopyroxene and amphibole, C) showing several histories for the influx of hydrothermal waters, D) showing a cross fiber occurrences, E) showing acicular shaped tremolites, and F) showing the talcification. Abbbrivation: Se for serpentine, Mt for magnetites, Ol for olivine, Opx for orthopyroxene, Am for amphibole, Tr for tremolite and Tc for Talc.	미상	PLM, XRD, SEM	Photomicrographs of serpentinites from the Jeongjeon area. A) for a typical serpentinite showing serpentines rimmed by magnetites, B) for a peridotite containing olivine, orthopyroxene and amphibole, C) showing several histories for the influx of hydrothermal waters, D) showing a cross fiber occurrences, E) showing acicular shaped tremolites, and F) showing the talcification. Abbbrivation: Se for serpentine, Mt for magnetites, Ol for olivine, Opx for orthopyroxene, Am for amphibole, Tr for tremolite and Tc	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2001	JJ06-01~05, OC08-01~04	Photomicrographs of dolomitic rocks from the Ocheon area. A, B) for a dolomitic rocks showing columnar, massive or crystalline textures, C) showing acicular or fibrous shaped tremolites (cross nicol for C, open nicol for D). Abbbrivation: Do for dolomite and Tr for tremolite.	미상	PLM, XRD, SEM	Photomicrographs of dolomitic rocks from the Ocheon area. A, B) for a dolomitic rocks showing columnar, massive or crystalline textures, C) showing acicular or fibrous shaped tremolites (cross nicol for C, open nicol for D). Abbbrivation: Do for dolomite and Tr for tremolite.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2002	JJ06-01~05, OC08-01~04	Representative XRD analyses of asbestos from Jeongjeon(JJ) and Ocheon(OC) areas. Ch for chryostile and Ac for actinolite.	미상	PLM, XRD, SEM	Representative XRD analyses of asbestos from Jeongjeon(JJ) and Ocheon(OC) areas. Ch for chryostile and Ac for actinolite.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2003	JJ06-01~05, OC08-01~04	Photomicrographs of chryostiles from the Jeongjeon area. A, B) for a typical chryostile showing twist and wave shapes.	미상	PLM, XRD, SEM	Photomicrographs of chryostiles from the Jeongjeon area. A, B) for a typical chryostile showing twist and wave shapes.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2004	JJ06-01~05, OC08-01~04	Photomicrographs of tremolite asbestos from the serpentinite of the Jeongjeon area. A, B) showing acicular or curved shapes.	미상	PLM, XRD, SEM	Photomicrographs of tremolite asbestos from the serpentinite of the Jeongjeon area. A, B) showing acicular or curved shapes.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2005	JJ06-01~05, OC08-01~04	Photomicrographs of tremolite asbestos from dolomitic rocks of the Ocheon area. A, B) showing acicular or curved shapes.	미상	PLM, XRD, SEM	Photomicrographs of tremolite asbestos from dolomitic rocks of the Ocheon area. A, B) showing acicular or curved shapes.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2006	JJ06-01~05, OC08-01~04	Photomicrographs of tremolite asbestos from dolomitic rocks of the Ocheon area. A, B) showing bundle, acicular or curved shapes.	미상	PLM, XRD, SEM	Photomicrographs of tremolite asbestos from dolomitic rocks of the Ocheon area. A, B) showing bundle, acicular or curved shapes.	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2007	JJ06-01~05, OC08-01~04	Representative PLM results of the asbestos from Jeongjeon(JJ) and Ocheon(OC) areas	미상	PLM, XRD, SEM	Representative PLM results of the asbestos from Jeongjeon(JJ) and Ocheon(OC) areas	보령지역 두 석면광산의 성인 차이(자원 환경지질 Econ_v46n2p165)	36.501283 126.499869; 36.501283 126.670781; 36.353294 126.670781; 36.353294 126.499869
2008	DJ 11-01~03, DJ12-01~03	Geological map of the study area and sample localities.	미상	PLM, XRD, SEM, TEM	Geological map of the study area and sample localities.	충남 서부 서산층군 내 해포석의 산출(자원 환경지질 Econ_v46n2p141_F01)	36.997981 126.668697; 36.997981 126.818056; 36.868547 126.818056; 36.868547 126.668697
2009	DJ 11-01~03, DJ12-01~03	Representative photomicrographs of sample fragment from the studied area. A1) for the typical Songak schist showing foliation, B2) for a dolomitic rock containing recrystallization, C1) for dolomitic rocks within the Pyeongtaek migmatic gneiss showing coexisting dolomite and tremolite asbestos, and D) for a dolomitic rock containing tremolite asbestos. Abbreviations: Bi for biotite, Q for Quartz, Do for Dolomite and Tr for Tremolite.	미상	PLM, XRD, SEM, TEM	Representative photomicrographs of sample fragment from the studied area. A1) for the typical Songak schist showing foliation, B2) for a dolomitic rock containing recrystallization, C1) for dolomitic rocks within the Pyeongtaek migmatic gneiss showing coexisting dolomite and tremolite asbestos, and D) for a dolomitic rock containing tremolite asbestos. Abbreviations: Bi for biotite, Q for Quartz, Do for Dolomite and Tr for Tremolite.	충남 서부 서산층군 내 해포석의 산출(자원 환경지질 Econ_v46n2p141_F01)	36.997981 126.668697; 36.997981 126.818056; 36.868547 126.818056; 36.868547 126.668697
2010	DJ 11-01~03, DJ12-01~03	Representative XRD results of samples from the studied area. A) for sepiolite coexisting with calcite(DJ 06-01), B) for talc coexisting with calcite(DJ 06-03), C, D) for tremolite coexisting with actinolite (DJ 11-03, DJ 12-01).	미상	PLM, XRD, SEM, TEM	Representative XRD results of samples from the studied area. A) for sepiolite coexisting with calcite(DJ 06-01), B) for talc coexisting with calcite(DJ 06-03), C, D) for tremolite coexisting with actinolite (DJ 11-03, DJ 12-01).	충남 서부 서산층군 내 해포석의 산출(자원 환경지질 Econ_v46n2p141_F01)	36.997981 126.668697; 36.997981 126.818056; 36.868547 126.818056; 36.868547 126.668697
2011	DJ 11-01~03, DJ12-01~03	Representative SEM results of sepiolites(A, B) and tremolites(C, D) from the studied area. Sepiolites(A, B) showing twisted and wave shapes, and tremolites(C, D) showing acicular or curved shapes.	미상	PLM, XRD, SEM, TEM	Representative SEM results of sepiolites(A, B) and tremolites(C, D) from the studied area. Sepiolites(A, B) showing twisted and wave shapes, and tremolites(C, D) showing acicular or	충남 서부 서산층군 내 해포석의 산출(자원 환경지질 Econ_v46n2p141_F01)	36.997981 126.668697; 36.997981 126.818056; 36.868547 126.818056; 36.868547 126.668697
2012	DJ 11-01~03, DJ12-01~03	Representative TEM results of sepiolites (A) and tremolites(B1, B2) from the studied area.	미상	PLM, XRD, SEM, TEM	Representative TEM results of sepiolites (A) and tremolites(B1, B2) from the studied area.	충남 서부 서산층군 내 해포석의 산출(자원 환경지질 Econ_v46n2p141_F01)	36.997981 126.668697; 36.997981 126.818056; 36.868547 126.818056; 36.868547 126.668697
2013	DJ 11-01~03, DJ12-01~03	Representative PLM results of the tremolite and actinolite asbestos from the Dangjin area	미상	PLM, XRD, SEM, TEM	Representative PLM results of the tremolite and actinolite asbestos from the Dangjin area	충남 서부 서산층군 내 해포석의 산출(자원 환경지질 Econ_v46n2p141_F01)	36.997981 126.668697; 36.997981 126.818056; 36.868547 126.818056; 36.868547 126.668697

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2014	BY120	Generalized geologic map of the Goseong and Geoje mineralized district. (A) Generalized geologic map of the South of Goseong and Geoje mineralized district (modified by Park and Jwa., 2000). (B) Generalized geologic map of the Buyeong deposit, showing the orientation of the principal quartz vein (modified from Paik et al., 2006; Chang et al., 1983; Chi et al., 1983).	미상	가열냉각, 황안정동위원소 분석	Generalized geologic map of the Goseong and Geoje mineralized district. (A) Generalized geologic map of the South of Goseong and Geoje mineralized district (modified by Park and Jwa., 2000). (B) Generalized geologic map of the Buyeong deposit, showing the orientation of the principal quartz vein (modified from Paik et al., 2006; Chang et al., 1983; Chi et al., 1983).	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2015	BY120	Plan section of the Buyeong deposit, showing the orientation and location of the principal quartz veins and sampling locations.	미상	가열냉각, 황안정동위원소 분석	Plan section of the Buyeong deposit, showing the orientation and location of the principal quartz veins and sampling locations.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2016	BY120	Outcrop photographs of quartz veins from the Buyeong deposit. (A), (B), (C) Close up of white and transparent quartz vein from the Won vein. (D), (E), (F) Main mined places of the Won vein. Abbreviations: Cp = chalcopyrite, Ml = malachite, Py = pyrite, Sp = sphalerite, Qz = quartz.	미상	가열냉각, 황안정동위원소 분석	Outcrop photographs of quartz veins from the Buyeong deposit. (A), (B), (C) Close up of white and transparent quartz vein from the Won vein. (D), (E), (F) Main mined places of the Won vein. Abbreviations: Cp = chalcopyrite, Ml = malachite, Py = pyrite, Sp = sphalerite, Qz = quartz.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2017	BY120	Paragenetic sequence of ore, gangue and alteration minerals from the Buyeong deposit.	미상	가열냉각, 황안정동위원소 분석	Paragenetic sequence of ore, gangue and alteration minerals from the Buyeong deposit.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2018	BY120	Microphotographs of ore and gangue minerals representative for quartz veins of the Buyeong deposit. (A) and (B) Pyrite coexisting with chalcopyrite and sphalerite partially replaced by sphalerite oxide. (C) Sphalerite and chalcopyrite blebs coexisting with pyrite. (D) Galena and sphalerite blebs coexisting with pyrite. (E) Galena coexisting with sphalerite and chalcopyrite. (F) Chalcopyrite partially replaced by chalcocite and coexisting with pyrrhotite. (G) Marcasite coexisting with chalcopyrite. (H) Galenobismutite blebs coexisting with chalcopyrite and sphalerite that was star shape coexisting with chalcopyrite. Abbreviations: Cc = chalcocite, Cp = chalcopyrite, Gb = galenobismutite, Gn = galena, Ma = marcasite, Py = pyrite, Qz = quartz, Sp = sphalerite, Sp oxide = sphalerite oxide.	미상	가열냉각, 황안정동위원소 분석	Microphotographs of ore and gangue minerals representative for quartz veins of the Buyeong deposit. (A) and (B) Pyrite coexisting with chalcopyrite and sphalerite partially replaced by sphalerite oxide. (C) Sphalerite and chalcopyrite blebs coexisting with pyrite. (D) Galena and sphalerite blebs coexisting with pyrite. (E) Galena coexisting with sphalerite and chalcopyrite. (F) Chalcopyrite partially replaced by chalcocite and coexisting with pyrrhotite. (G) Marcasite coexisting with chalcopyrite. (H) Galenobismutite blebs coexisting with chalcopyrite and sphalerite that was star shape coexisting with chalcopyrite. Abbreviations: Cc = chalcocite, Cp = chalcopyrite, Gb = galenobismutite, Gn = galena, Ma = marcasite, Py = pyrite, Qz = quartz, Sp = sphalerite, Sp oxide = sphalerite oxide.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2019	BY120	Microphotographs of representative fluid inclusion types in quartz from the Buyeong deposit. (A) and (D) Occurrence of liquid-rich type inclusion in quartz. (B) and (E) Close-up liquid-rich type inclusions in quartz. (C) and (F) Sketch of liquid-rich type inclusions in quartz.	미상	가열냉각, 황안정동위원소 분석	Microphotographs of representative fluid inclusion types in quartz from the Buyeong deposit. (A) and (D) Occurrence of liquid-rich type inclusion in quartz. (B) and (E) Close-up liquid-rich type inclusions in quartz. (C) and (F) Sketch of liquid-rich type inclusions in	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2020	BY120	Frequency-initial melting temperature histogram from liquid-rich type inclusions in quartz from the Buyeong deposit. The eutectic temperatures of the KCl-H ₂ O (Linke, 1965) binary system, NaCl-H ₂ O (Hall et al., 1988) binary system, KCl-NaCl-H ₂ O (Sterner et al., 1988) ternary system and MgCl ₂ -NaCl-H ₂ O (Luzhnaya and Vereshtcheta, 1946) ternary system. N= number of analysis.	미상	가열냉각, 황안정동위원소 분석	Frequency-initial melting temperature histogram from liquid-rich type inclusions in quartz from the Buyeong deposit. The eutectic temperatures of the KCl-H ₂ O (Linke, 1965) binary system, NaCl-H ₂ O (Hall et al., 1988) binary system, KCl-NaCl-H ₂ O (Sterner et al., 1988) ternary system and MgCl ₂ -NaCl-H ₂ O (Luzhnaya and Vereshtcheta, 1946) ternary system. N= number of	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2021	BY120	Frequency diagram of salinities for fluid inclusions in quartz from the Buyeong deposit. N = number of analysis.	미상	가열냉각, 황안정동위원소 분석	Frequency diagram of salinities for fluid inclusions in quartz from the Buyeong deposit. N = number of analysis.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2022	BY120	Frequency diagram of homogenization temperatures for fluid inclusions in quartz from the Buyeong deposit. N = number of analysis.	미상	가열냉각, 황안정동위원소 분석	Frequency diagram of homogenization temperatures for fluid inclusions in quartz from the Buyeong deposit. N = number of analysis.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2023	BY120	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the Buyeong deposit. N=number of analysis.	미상	가열냉각, 황안정동위원소 분석	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the Buyeong deposit. N=number of analysis.	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2024	BY120	Hydrogen versus oxygen isotope diagram showing the calculated stable isotope values of hydrothermal fluid compositions from the Buyeong deposit. Also shown are the isotopic fields for paleowater (Shelton et al., 1990) and modern Korean groundwater (Kim and Nakai, 1988). The magmatic and metamorphic water boxes are from Ohmoto(1986) and Sheppard (1986). Open diamonds, open circle, open squares, open pentagons and open stars indicate data by Choi et al., (1993), Shelton et al., (1990) and Park(2000), respectively.	미상	가열냉각, 황안정동위원소 분석	Hydrogen versus oxygen isotope diagram showing the calculated stable isotope values of hydrothermal fluid compositions from the Buyeong deposit. Also shown are the isotopic fields for paleowater (Shelton et al., 1990) and modern Korean groundwater (Kim and Nakai, 1988). The magmatic and metamorphic water boxes are from Ohmoto(1986) and Sheppard (1986). Open diamonds, open circle, open squares, open pentagons and open stars indicate data by Choi et al., (1993), Shelton et al., (1990) and Park(2000),	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2025	BY120	Sulfur, oxygen and hydrogen isotopic data of minerals from the Buyeong deposit	미상	가열냉각, 황안정동위원소 분석	Sulfur, oxygen and hydrogen isotopic data of minerals from the Buyeong deposit	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2026	BY120	Characteristics of some deposits in the Goseong and Geoje mineralized district	미상	가열냉각, 황안정동위원소 분석	Characteristics of some deposits in the Goseong and Geoje mineralized district	부영 금-은광상의 광석광물, 유체포유물 및 안정동위원소 연구(자원환경지질 Econ_v42n6p513)	34.971761 128.216725; 34.971761 128.231508; 34.961711 128.231508; 34.961711 128.216725
2027	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	General geological map of the Sambo gold deposit. A=Jija vein, B=Pungja vein, C=Pungjaji vein and D=Gwangsan vein. Abbreviation; GB=Gyeongsang Basin, GM=Gyeonggi Massif, OB=Okcheon Belt, YM=Yeongnam Massif, TB=Taebaek Basin.	미상	가열냉각기	General geological map of the Sambo gold deposit. A=Jija vein, B=Pungja vein, C=Pungjaji vein and D=Gwangsan vein. Abbreviation; GB=Gyeongsang Basin, GM=Gyeonggi Massif, OB=Okcheon Belt, YM=Yeongnam Massif, TB=Taebaek	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2028	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	XRD patterns of alteration samples from each veins. A and B: samples from A-type vein (the Jija vein). C and B: samples from B-type vein (the Pungja vein). Note sericite and hematite are dominant in alteration zone of A-type vein whereas chlorite is dominant in alteration zone of B-type vein. Abbreviation; ab=albite, chl=chlorite, hm=hematite, mc=microcline, qtz=quartz, ser=sericite.	미상	가열냉각기	XRD patterns of alteration samples from each veins. A and B: samples from A-type vein (the Jija vein). C and B: samples from B-type vein (the Pungja vein). Note sericite and hematite are dominant in alteration zone of A-type vein whereas chlorite is dominant in alteration zone of B-type vein. Abbreviation; ab=albite, chl=chlorite, hm=hematite, mc=microcline,	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2029	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	Histogram showing Au contents in electrum from A-type vein. Abbreviations are same in fig. 3.	미상	가열냉각기	Histogram showing Au contents in electrum from A-type vein. Abbreviations are same in fig. 3.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2030	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	Frequency diagrams of total homogenization temperatures and salinities of fluid inclusions from the NNW-trending A-type vein and NE-trending B-type vein.	미상	가열냉각기	Frequency diagrams of total homogenization temperatures and salinities of fluid inclusions from the NNW-trending A-type vein and NE-trending B-type vein.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2031	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	Diagram showing homogenization temperature vs. salinity of fluid inclusions in quartz. Inclusions from A-type and B-type veins represent boiling and later incursion of more dilute water.	미상	가열냉각기	Diagram showing homogenization temperature vs. salinity of fluid inclusions in quartz. Inclusions from A-type and B-type veins represent boiling and later incursion of more dilute water.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2032	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	Isothermal oxygen fugacity versus pH showing the gold solubility as HS- and Cl- complexes (modified form Seward, 1982; Brown, 1986) Hypothetical fluid paths of A-type vein (the Jija vein) I; mixing with oxidizing fluids and II; boiling.	미상	가열냉각기	Isothermal oxygen fugacity versus pH showing the gold solubility as HS- and Cl- complexes (modified form Seward, 1982; Brown, 1986) Hypothetical fluid paths of A-type vein (the Jija vein) I; mixing with oxidizing fluids and II; boiling.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2033	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	The chemical composition of electrum from A-type vein (the Jija vein) in the Sambo gold deposit.	미상	가열냉각기	The chemical composition of electrum from A-type vein (the Jija vein) in the Sambo gold deposit.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2034	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-A/C	Summary of general characteristics for the Sambo gold deposit and a comparison with the Mugeuk gold system related to pull-apart basin.	미상	가열냉각기	Summary of general characteristics for the Sambo gold deposit and a comparison with the Mugeuk gold system related to pull-apart basin.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2035	GA-8-3-2-1/8-3-2-4/8-2-1-19/4-1-22/4-1-233/4-1-24/4-1-25, SB2306-	Comparison between the Sambo gold deposit and the Mugeuk gold system related to pull-apart basin.	미상	가열냉각기	Comparison between the Sambo gold deposit and the Mugeuk gold system related to pull-apart basin.	무안 지역, 삼보 광상의 금광화작용(자원 환경지질 Econ_v41n3p275)	34.941911 126.403933; 34.941911 126.515739; 34.807436 126.515739; 34.807436 126.403933
2036	GSM26-3-24/26-4-5/26-3-56/26-3-50	Generalized geological map of the Geumseong Mo mine (modified from Kim et al., 2001).	미상	EPMA	Generalized geological map of the Geumseong Mo mine (modified from Kim et al., 2001).	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원 환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2037	GSM26-3-24/26-4-5/26-3-56/26-3-50	Representative microphotographs of skarns in the Geumseong mine. (A) Clinopyroxene-garnet zone with Mo in upper skarn. (B) Garnet zone in upper skarn. Note some garnets are filled by magnetite. (C) Typical lower skarn with layers of magnetite and clinopyroxene \pm olivine. (D) Comb quartz layer in aplitic cupola containing molybdenite. Black arrow indicates the growth direction of comb quartz. See Fig. 2 for abbreviations.	미상	EPMA	Representative microphotographs of skarns in the Geumseong mine. (A) Clinopyroxene-garnet zone with Mo in upper skarn. (B) Garnet zone in upper skarn. Note some garnets are filled by magnetite. (C) Typical lower skarn with layers of magnetite and clinopyroxene \pm olivine. (D) Comb quartz layer in aplitic cupola containing molybdenite. Black arrow indicates the growth direction of comb quartz. See Fig. 2 for abbreviations.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원 환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2038	GSM26-3-24/26-4-5/26-3-56/26-3-50	Ternary diagrams illustrating the variations in chemistry of major minerals in upper and lower skarns. (A) Jo-Di-Hd plot (mol. %) of clinopyroxenes. (B) Pyr-Gr-Ad plot (mol. %) of garnets. See Table 1 for abbreviations.	미상	EPMA	Ternary diagrams illustrating the variations in chemistry of major minerals in upper and lower skarns. (A) Jo-Di-Hd plot (mol. %) of clinopyroxenes. (B) Pyr-Gr-Ad plot (mol. %) of garnets. See Table 1 for abbreviations.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원 환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2039	GSM26-3-24/26-4-5/26-3-56/26-3-50	Lower skarn olivine compositions plotted in Te-Fo-Fa diagram (mol. %). See Table 2 for abbreviations.	미상	EPMA	Lower skarn olivine compositions plotted in Te-Fo-Fa diagram (mol. %). See Table 2 for abbreviations.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원 환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2040	GSM26-3-24/26-4-5/26-3-56/26-3-50	The schematic evolutionary path of the ore bearing fluids during the various stage of mineralization in the Geumseong area as deduced from the XCO ₂ versus temperature diagram (modified after Meinert, 1982; Harris and Einaudi, 1982). (A) General environment for calcic skarn formation (shaded area). (B) The arrow indicates the evolution of magnesian skarn from prograde skarn to retrograde skarn. Calc-silicate equilibria based on the experimental work of Gordon and Greenwood (1971), Greenwood (1967), Slaughter et al. (1975) and Newton (1966). Abbreviations; brc=brucite, mgs=magnesite, per=periclase, sps=serpentine and tlc=talc (See Tables 1 and 2 for other abbreviations).	미상	EPMA	The schematic evolutionary path of the ore bearing fluids during the various stage of mineralization in the Geumseong area as deduced from the XCO ₂ versus temperature diagram (modified after Meinert, 1982; Harris and Einaudi, 1982). (A) General environment for calcic skarn formation (shaded area). (B) The arrow indicates the evolution of magnesian skarn from prograde skarn to retrograde skarn. Calc-silicate equilibria based on the experimental work of Gordon and Greenwood (1971), Greenwood (1967), Slaughter et al. (1975) and Newton (1966). Abbreviations; brc=brucite, mgs=magnesite, per=periclase, sps=serpentine and tlc=talc (See Tables	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원 환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2041	GSM26-3-24/26-4-5/26-3-56/26-3-50	Representative clinopyroxene, garnet and amphibole compositions of the upper skarn in the Geumseong deposit.	미상	EPMA	Representative clinopyroxene, garnet and amphibole compositions of the upper skarn in the Geumseong deposit.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2042	GSM26-3-24/26-4-5/26-3-56/26-3-50	Representative olivine, clinopyroxene, phlogopite and amphibole compositions of the lower skarn in the Geumseong deposit.	미상	EPMA	Representative olivine, clinopyroxene, phlogopite and amphibole compositions of the lower skarn in the Geumseong deposit.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2043	GSM26-3-24/26-4-5/26-3-56/26-3-50	Major and trace element compositions of aplite in the Geumseong deposit.	미상	EPMA	Major and trace element compositions of aplite in the Geumseong deposit.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2044	GSM26-3-24/26-4-5/26-3-56/26-3-50	K-Ar age data of K-feldspar from aplitic cupola in the Geumseong deposit.	미상	EPMA	K-Ar age data of K-feldspar from aplitic cupola in the Geumseong deposit.	금성 몰리브데늄광상의 잠두 반암형 광체에 대한 부존가능성과 성인적 환경(자원환경지질 Econ_v40n1p001)	37.108333 128.158333; 37.108333 128.275000; 37.016667 128.275000; 37.016667 128.158333
2045	H1~17	General geological map of the Jukwangri and Inziri area, Hwawon-myeon.	미상	가열냉각기, 안정동위원소,	General geological map of the Jukwangri and Inziri area, Hwawon-myeon.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2046	H1~17	Geological and sample location map of the Jukwangri area, Hwawon-myeon.	미상	가열냉각기, 안정동위원소,	Geological and sample location map of the Jukwangri area, Hwawon-myeon.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2047	H1~17	Paragenetic sequence of minerals from the No. 1 quartz vein in the Jukwangri area, Hwawon-myeon.	미상	가열냉각기, 안정동위원소,	Paragenetic sequence of minerals from the No. 1 quartz vein in the Jukwangri area, Hwawon-myeon.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2048	H1~17	Photomicrographs of minerals from No. 1 quartz vein. A; Pyrite coexisting with arsenopyrite and quartz, B; Chalcopyrite coexisting with pyrite and quartz, C; Galena coexisting with quartz and calcite, D; Argentian tetrahedrite coexisting with galena. Abbreviations: Py; pyrite, Asp; arsenopyrite, Cp; chalcopyrite, Gn; galena, Gn oxide; galena oxide, Th; argentian tetrahedrite, Qz; quartz, Ca; calcite. Scale bars are 100 µm in length.	미상	가열냉각기, 안정동위원소,	Photomicrographs of minerals from No. 1 quartz vein. A; Pyrite coexisting with arsenopyrite and quartz, B; Chalcopyrite coexisting with pyrite and quartz, C; Galena coexisting with quartz and calcite, D; Argentian tetrahedrite coexisting with galena. Abbreviations: Py; pyrite, Asp; arsenopyrite, Cp; chalcopyrite, Gn; galena, Gn oxide; galena oxide, Th; argentian tetrahedrite, Qz; quartz, Ca; calcite. Scale bars are	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2049	H1~17	Frequency diagram of salinities for fluid inclusions in quartz from the No. 1 quartz vein.	미상	가열냉각기, 안정동위원소,	Frequency diagram of salinities for fluid inclusions in quartz from the No. 1 quartz vein.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2050	H1~17	Frequency diagram of homogenization temperatures for fluid inclusions in quartz from the No. 1 quartz vein.	미상	가열냉각기, 안정동위원소,	Frequency diagram of homogenization temperatures for fluid inclusions in quartz from the No. 1 quartz vein.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2051	H1~17	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the No. 1 quartz vein.	미상	가열냉각기, 안정동위원소,	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the No. 1 quartz vein.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2052	H1~17	Hydrogen versus oxygen isotope diagram displaying stable isotope systematics of hydrothermal fluid composition of the No. 1 quartz vein. Paleowater data from So and Shelton(1987a, b) and So et al.(1987), Modern Korean Groundwater data from Kim and Nakai(1981, 1988)	미상	가열냉각기, 안정동위원소,	Hydrogen versus oxygen isotope diagram displaying stable isotope systematics of hydrothermal fluid composition of the No. 1 quartz vein. Paleowater data from So and Shelton(1987a, b) and So et al.(1987), Modern Korean Groundwater data from	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2053	H1~17	Ore grades of quartz veins from the Jukwangri area.	미상	가열냉각기, 안정동위원소,	Ore grades of quartz veins from the Jukwangri area.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2054	H1~17	Oxygen and hydrogen isotope data of quartz from No. 1 quartz vein of the Jukwangri area.	미상	가열냉각기, 안정동위원소,	Oxygen and hydrogen isotope data of quartz from No. 1 quartz vein of the Jukwangri area.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2055	H1~17	Characteristics of Au-Ag vein deposits of the Hwawon area.	미상	가열냉각기, 안정동위원소,	Characteristics of Au-Ag vein deposits of the Hwawon area.	전남 화원면 주광리일대 석영맥의 산상 및 생성환경(자원환경지질 Econ_v39n6p653)	34.733333 126.258333; 34.733333 126.316667; 34.669444 126.316667; 34.669444 126.258333
2056	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	General geological map of the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	General geological map of the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2057	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Geological and sample location map of the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	Geological and sample location map of the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2058	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Paragenetic sequence of minerals from the quartz veins in the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	Paragenetic sequence of minerals from the quartz veins in the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2059	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Photomicrographs of minerals from quartz veins. A; Galena coexisting or infilling with epidote, B; Sphalerite coexisting with epidote, C; Pyrite coexisting with calcite, D; Sphalerite partly replaced Zn-Fe oxide, E; Chalcopyrite and galena coexisting with epidote, F; Bornite and chalcopyrite coexisting with epidote, G; Cubanite and chalcopyrite coexisting with epidote, H; Argentian tetrahedrite coexisting with chalcopyrite, I; Galena coexisting with epidote and calcite, J; Pb-Ag-S system and Pb-Te-S system coexisting with galena. Abbreviation: Py; pyrite, Sp; sphalerite, Cp; calcopyrite, Bo; bornite, Cu; cubanite, Gn; galena, Th; argentian tetrahedrite, Pb-Ag-S; Pb-Ag-S system, Pb-Te-S; Pb-Te-S system, Qz; quartz, Ep; epidote, Ca; calcite. Scale bar indicated 100 micron in length.	미상	ICP-MS, EPMA, 가열냉각기	Photomicrographs of minerals from quartz veins. A; Galena coexisting or infilling with epidote, B; Sphalerite coexisting with epidote, C; Pyrite coexisting with calcite, D; Sphalerite partly replaced Zn-Fe oxide, E; Chalcopyrite and galena coexisting with epidote, F; Bornite and chalcopyrite coexisting with epidote, G; Cubanite and chalcopyrite coexisting with epidote, H; Argentian tetrahedrite coexisting with chalcopyrite, I; Galena coexisting with epidote and calcite, J; Pb-Ag-S system and Pb-Te-S system coexisting with galena. Abbreviation: Py; pyrite, Sp; sphalerite, Cp; calcopyrite, Bo; bornite, Cu; cubanite, Gn; galena, Th; argentian tetrahedrite, Pb-Ag-S; Pb-Ag-S system, Pb-Te-S system, Qz; quartz, Ep; epidote, Ca; calcite. Scale bar indicated	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2060	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Photomicrographs of representative types of fluid inclusions in quartz from No. 1 and 2 veins of the Hwawon area. A; Liquid-rich type and vapor-rich type inclusions in quartz of wallrock alteration, B and C; Liquid-rich type and vapor-rich type inclusions in white or gray quartz, D; Liquid-rich type inclusions in transparent quartz. Scale bar indicated 100 micron in length.	미상	ICP-MS, EPMA, 가열냉각기	Photomicrographs of representative types of fluid inclusions in quartz from No. 1 and 2 veins of the Hwawon area. A; Liquid-rich type and vapor-rich type inclusions in quartz of wallrock alteration, B and C; Liquid-rich type and vapor-rich type inclusions in white or gray quartz, D; Liquid-rich type inclusions in transparent quartz. Scale bar indicated 100 micron in length.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2061	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Temperature nucleated vapor bubble versus final melting temperature of ice of liquid-rich type inclusions from quartz in the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	Temperature nucleated vapor bubble versus final melting temperature of ice of liquid-rich type inclusions from quartz in the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2062	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Frequency-temperature histogram of first melting temperature of ice of liquid-rich type inclusions from quartz in the Hwawon area. The eutectic temperatures of the KCl-H ₂ O(Linke, 1965) binary system, NaCl-H ₂ O(Hall et al., 1988) binary system, KCl-NaCl-H ₂ O(Sterner et al., 1988) ternary system and MgCl ₂ -NaCl-H ₂ O(Luzhnaya and Vereshtchetina, 1946) ternary system.	미상	ICP-MS, EPMA, 가열냉각기	Frequency-temperature histogram of first melting temperature of ice of liquid-rich type inclusions from quartz in the Hwawon area. The eutectic temperatures of the KCl-H ₂ O(Linke, 1965) binary system, NaCl-H ₂ O(Hall et al., 1988) binary system, KCl-NaCl-H ₂ O(Sterner et al., 1988) ternary system and MgCl ₂ -NaCl-H ₂ O(Luzhnaya and Vereshtchetina, 1946) ternary system.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2063	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Frequency diagram of salinities for fluid inclusions in quartz from the quartz veins.	미상	ICP-MS, EPMA, 가열냉각기	Frequency diagram of salinities for fluid inclusions in quartz from the quartz veins.	전남 화원일대의 석영맥에서 산출되는 광 석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2064	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Frequency diagram of homogenization temperatures for fluid inclusions in quartz from the quartz veins.	미상	ICP-MS, EPMA, 가열냉각기	Frequency diagram of homogenization temperatures for fluid inclusions in quartz from the quartz veins.	전남 화원일대의 석영맥에서 산출되는 광석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2065	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the quartz veins.	미상	ICP-MS, EPMA, 가열냉각기	Salinity versus homogenization temperature diagram for fluid inclusions in quartz from the quartz veins.	전남 화원일대의 석영맥에서 산출되는 광석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2066	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Hydrogen versus oxygen isotope diagram displaying stable isotope systematics of hydrothermal fluid composition of the quartz veins. Paleowater data from So and Shelton(1987a, b) and So et al.(1987), Modern Korean Groundwater data from Kim and Nakai(1981, 1988).	미상	ICP-MS, EPMA, 가열냉각기	Hydrogen versus oxygen isotope diagram displaying stable isotope systematics of hydrothermal fluid composition of the quartz veins. Paleowater data from So and Shelton(1987a, b) and So et al.(1987), Modern Korean Groundwater data from	전남 화원일대의 석영맥에서 산출되는 광석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2067	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Ore grades of quartz veins from the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	Ore grades of quartz veins from the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2068	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Oxygen and hydrogen isotopic data of quartz from the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	Oxygen and hydrogen isotopic data of quartz from the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2069	H24/25/41/43/44/45/46/36/37/50/53/54/55/56/57/86/72/20/89	Characteries of Au-Ag vein deposits of the Hwawon area.	미상	ICP-MS, EPMA, 가열냉각기	Characteries of Au-Ag vein deposits of the Hwawon area.	전남 화원일대의 석영맥에서 산출되는 광석광물과 이의 생성환경(자원환경지질 Econ_v39n5p583)	34.750000 126.276667; 34.750000 126.333333; 34.704167 126.333333; 34.704167 126.276667
2070	B.U. 84720/722/9A6/721-3/84709/84721	Location map of the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Location map of the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2071	B.U. 84720/722/9A6/721-3/84709/84721	Geological map of the Baekun gold-silver deposit (Modified from Lee, C.S., 1989).	미상	EPMA, 가열냉각기	Geological map of the Baekun gold-silver deposit (Modified from Lee, C.S., 1989).	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2072	B.U. 84720/722/9A6/721-3/84709/84721	Paragenetic sequence of mineralization at the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Paragenetic sequence of mineralization at the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2073	B.U. 84720/722/9A6/721-3/84709/84721	Photomicrographs of ore minerals from the Baekun gold-silver deposit. A; Pyrrhotite coexisting with sphalerite, B; Sphalerite coexisting with rutile, C; Arsenopyrite and sphalerite coexisting with pyrrhotite, D; Galena with tetrahedrite partly replacing and infilling fracture of sphalerite and pyrite, E; Boulangerite partly replacing pyrrhotite and sphalerite, F; Marcasite, pyrite and chalcopyrite partly replacing pyrrhotite, G; Stephanite coexisting with galena, H; Ag-Te-Sn-S mineral coexisting with galena, I; Argentite and Ag-Cu-S mineral infilling fracture of chalcopyrite, J; Stannite coexisting with sphalerite. Abbreviation: Asp; arsenopyrite, Po; pyrrhotite, Ru; rutile, Py; pyrite, Sp; sphalerite, Ma; marcasite, St; stannite, Cp; calcopyrite, Gn; galena, Th; tetrahedrite, Bo; boulangerite, Sn; stephanite, Ag; argentite, Ag-Te-Sn-S; Ag-Te-Sn-S mineral, Ag-Cu-S; Ag-Cu-S mineral. Scale bar indicated 100 micron in length.	미상	EPMA, 가열냉각기	Photomicrographs of ore minerals from the Baekun gold-silver deposit. A; Pyrrhotite coexisting with sphalerite, B; Sphalerite coexisting with rutile, C; Arsenopyrite and sphalerite coexisting with pyrrhotite, D; Galena with tetrahedrite partly replacing and infilling fracture of sphalerite and pyrite, E; Boulangerite partly replacing pyrrhotite and sphalerite, F; Marcasite, pyrite and chalcopyrite partly replacing pyrrhotite, G; Stephanite coexisting with galena, H; Ag-Te-Sn-S mineral coexisting with galena, I; Argentite and Ag-Cu-S mineral infilling fracture of chalcopyrite, J; Stannite coexisting with sphalerite. Abbreviation: Asp; arsenopyrite, Po; pyrrhotite, Ru; rutile, Py; pyrite, Sp; sphalerite, Ma; marcasite, St; stannite, Cp; calcopyrite, Gn; galena, Th; tetrahedrite, Bo; boulangerite, Sn; stephanite, Ag; argentite, Ag-Te-Sn-S; Ag-Te-Sn-S mineral, Ag-Cu-S; Ag-Cu-S mineral. Scale bar indicated 100 micron	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2074	B.U. 84720/722/9A6/721-3/84709/84721	Frequency diagram of salinities for fluid inclusions in quartz and calcite from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Frequency diagram of salinities for fluid inclusions in quartz and calcite from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2075	B.U. 84720/722/9A6/721-3/84709/84721	Frequency diagram of homogenization temperatures for fluid inclusions in quartz and calcite from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Frequency diagram of homogenization temperatures for fluid inclusions in quartz and calcite from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2076	B.U. 84720/722/9A6/721-3/84709/84721	Salinity vs. homogenization temperature diagram for fluid inclusions in quartz and calcite from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Salinity vs. homogenization temperature diagram for fluid inclusions in quartz and calcite from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2077	B.U. 84720/722/9A6/721-3/84709/84721	Temperature-fs2 diagram showing the formation conditions of stage I early ore minerals from the Baekun gold-silver deposit. Abbreviation: Po; pyrrhotite, Py; pyrite.	미상	EPMA, 가열냉각기	Temperature-fs2 diagram showing the formation conditions of stage I early ore minerals from the Baekun gold-silver deposit. Abbreviation: Po; pyrrhotite, Py; pyrite.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2078	B.U. 84720/722/9A6/721-3/84709/84721	Hydrogen vs. oxygen isotope diagram displaying stable isotope systematics of hydrothermal fluid composition of the Baekun gold-silver deposit. Paleowater data from So and Shelton (1987a, b) and So et al. (1987), Modern Korean Groundwater data from Kim and Nakai (1981, 1988).	미상	EPMA, 가열냉각기	Hydrogen vs. oxygen isotope diagram displaying stable isotope systematics of hydrothermal fluid composition of the Baekun gold-silver deposit. Paleowater data from So and Shelton (1987a, b) and So et al. (1987), Modern Korean Groundwater data from Kim and Nakai (1981, 1988).	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2079	B.U. 84720/722/9A6/721-3/84709/84721	Chemical composition of sphalerites from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Chemical composition of sphalerites from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2080	B.U. 84720/722/9A6/721-3/84709/84721	Chemical composition of arsenopyrites from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Chemical composition of arsenopyrites from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2081	B.U. 84720/722/9A6/721-3/84709/84721	Chemical composition of stannites from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Chemical composition of stannites from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2082	B.U. 84720/722/9A6/721-3/84709/84721	Chemical compositions of electrum from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Chemical compositions of electrum from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2083	B.U. 84720/722/9A6/721-3/84709/84721	Chemical composition of some minerals from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Chemical composition of some minerals from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2084	B.U. 84720/722/9A6/721-3/84709/84721	Surfur isotopic data of sulfide minerals from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Surfur isotopic data of sulfide minerals from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2085	B.U. 84720/722/9A6/721-3/84709/84721	Oxygen, carbon and hydrogen isotopic data of quartz and calcite from the Baekun gold-silver deposit.	미상	EPMA, 가열냉각기	Oxygen, carbon and hydrogen isotopic data of quartz and calcite from the Baekun gold-silver deposit.	백운 금-은광상에서 산출되는 광석광물과 생성환경(자원환경지질 Econ_v39n1p009)	35.626389 127.4625
2086	L1~L10, R1~R10	Location map of about 140 quartzite deposits occurring in South Korea (modified after Korea Mining Promotion Corporation, 1988, 1989). Solid dots indicate quartzite mines.	미상	XRF	Location map of about 140 quartzite deposits occurring in South Korea (modified after Korea Mining Promotion Corporation, 1988, 1989). Solid dots indicate quartzite mines.	경남 거창 풍원 규석광상의 산상과 매장량 평가(자원환경지질 Econ_v39n1p001)	35.788111 127.76625
2087	L1~L10, R1~R10	Simplified geological map showing the location of the Poongwon quartzite mine (modified after Kim and Kim, 1970).	미상	XRF	Simplified geological map showing the location of the Poongwon quartzite mine (modified after Kim and Kim, 1970).	경남 거창 풍원 규석광상의 산상과 매장량 평가(자원환경지질 Econ_v39n1p001)	35.788111 127.76625
2088	L1~L10, R1~R10	Photomicrographs of coarse grained granite gneiss(a), mica schist of the Deogyusan formation(b), quartzite intercalated with mica schist(c) and the quartzite layer(d) showing textural relations. Q=quartz, Pl=plagioclase, Bt=biotite, Mu=muscovite, Chl=chlorite.	미상	XRF	Photomicrographs of coarse grained granite gneiss(a), mica schist of the Deogyusan formation(b), quartzite intercalated with mica schist(c) and the quartzite layer(d) showing textural relations. Q=quartz, Pl=plagioclase, Bt=biotite, Mu=muscovite, Chl=chlorite.	경남 거창 풍원 규석광상의 산상과 매장량 평가(자원환경지질 Econ_v39n1p001)	35.788111 127.76625
2089	L1~L10, R1~R10	Calculation of the reserve from the Poongwon quartzite deposit.	미상	XRF	Calculation of the reserve from the Poongwon quartzite deposit.	경남 거창 풍원 규석광상의 산상과 매장량 평가(자원환경지질 Econ_v39n1p001)	35.788111 127.76625
2090	L1~L10, R1~R10	Major element data for the quartzite samples from the Poongwon quartzite deposit (L1~L10, R1~R10) including quartzite intercalated within mica schist (A-1 and A-2), and mica schist (A-3).	미상	XRF	Major element data for the quartzite samples from the Poongwon quartzite deposit (L1~L10, R1~R10) including quartzite intercalated within mica schist (A-1 and A-2), and mica schist (A-3).	경남 거창 풍원 규석광상의 산상과 매장량 평가(자원환경지질 Econ_v39n1p001)	35.788111 127.76625
2091	Type I/II/III/IV	Geologic map in the vicinity of the Daeyou pegmatite mine (modified from 1:250,000 Gwangju Sheet).	미상	XRD, EPMA, K-Ar 연대측정	Geologic map in the vicinity of the Daeyou pegmatite mine (modified from 1:250,000 Gwangju Sheet).	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2092	Type I/II/III/IV	Photomicrographs showing the mineral occurrences from the Daeyou mine. 1) Quartz (Q) intergrowth with plagioclase (Pl). 2) Plagioclase (Pl) replaced by K-feldspar (Kf) and muscovite (Ms). 3) Biotite (Bt) replaced by muscovite (Ms). 4) Relicts of opaque minerals (Op) in sericite (Se). Bar scales are 0.1 mm long.	미상	XRD, EPMA, K-Ar 연대측정	Photomicrographs showing the mineral occurrences from the Daeyou mine. 1) Quartz (Q) intergrowth with plagioclase (Pl). 2) Plagioclase (Pl) replaced by K-feldspar (Kf) and muscovite (Ms). 3) Biotite (Bt) replaced by muscovite (Ms). 4) Relicts of opaque minerals (Op) in sericite (Se). Bar scales are 0.1 mm long.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2093	Type I/II/III/IV	Photomicrographs showing the occurrences of tourmaline from the Daeyou mine. 1) Tourmaline (Tu) coexisting with k-feldspar (Pe-Mi) and quartz (Q). Fine muscovite veinlets are developed within tourmaline crystals. 2) Tourmaline (Tu) in quartz. 3) Tourmaline (Tu) partially altered to sericite (Se) and pyrite (Py). 4) Tourmaline (Tu) replaced by sericite (Se). Muscovite (Mu) are remained as relicts within tourmaline crystals generally along cleavage planes {110} and {100}. All bar scales are 0.1 mm long.	미상	XRD, EPMA, K-Ar 연대측정	Photomicrographs showing the occurrences of tourmaline from the Daeyou mine. 1) Tourmaline (Tu) coexisting with k-feldspar (Pe-Mi) and quartz (Q). Fine muscovite veinlets are developed within tourmaline crystals. 2) Tourmaline (Tu) in quartz. 3) Tourmaline (Tu) partially altered to sericite (Se) and pyrite (Py). 4) Tourmaline (Tu) replaced by sericite (Se). Muscovite (Mu) are remained as relicts within tourmaline crystals generally along cleavage planes {110} and {100}. All bar scales are 0.1 mm long.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2094	Type I/II/III/IV	Photo micrographs showing the occurrences of accessory minerals from the Daeyou mine. 1) Fine-grained opaque minerals (Op) in sericite (Se) flakes. Opaque minerals (pyrite) replaced by siderite (Si). 2) Almandine garnet (Ga), quartz (Q), orthoclase (Or) and plagioclase (Pl). 3) Fluorite (Fl) in equigranular quartz (Q). 4) Tabular zinnwaldite (Zd) grains intergrowth with quartz (Q) and orthoclase (Or). All bar scales are 0.1 mm long.	미상	XRD, EPMA, K-Ar 연대측정	Photo micrographs showing the occurrences of accessory minerals from the Daeyou mine. 1) Fine-grained opaque minerals (Op) in sericite (Se) flakes. Opaque minerals (pyrite) replaced by siderite (Si). 2) Almandine garnet (Ga), quartz (Q), orthoclase (Or) and plagioclase (Pl). 3) Fluorite (Fl) in equigranular quartz (Q). 4) Tabular zinnwaldite (Zd) grains intergrowth with quartz (Q) and orthoclase (Or). All bar scales are 0.1 mm long.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2095	Type I/II/III/IV	Triangular diagram showing the Y-site occupancy in tourmalines from the Daeyou mine.	미상	XRD, EPMA, K-Ar 연대측정	Triangular diagram showing the Y-site occupancy in tourmalines from the Daeyou mine.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2096	Type I/II/III/IV	Electron microprobe analyses of various types of tourmaline grains from the Daeyou mine. See text for the occurrence types.	미상	XRD, EPMA, K-Ar 연대측정	Electron microprobe analyses of various types of tourmaline grains from the Daeyou mine. See text for the occurrence types.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2097	Type I/II/III/IV	Major and trace element contents of muscovite and sericite from pegmatite of the Daeyou mine.	미상	XRD, EPMA, K-Ar 연대측정	Major and trace element contents of muscovite and sericite from pegmatite of the Daeyou mine.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2098	Type I/II/III/IV	Available radiometric ages of pegmatites in Korea.	미상	XRD, EPMA, K-Ar 연대측정	Available radiometric ages of pegmatites in Korea.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000
2099	Type I/II/III/IV	K-Ar ages of muscovite and sericite from the Daeyou pegmatite mine.	미상	XRD, EPMA, K-Ar 연대측정	K-Ar ages of muscovite and sericite from the Daeyou pegmatite mine.	대유 페그마타이트광상의 광물조성과 k-Ar연대(자원환경지질 Econ_v32n3p227)	35.800000 127.600000

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2100	1~9	Geological map of study area and location of measured sites: 1. Daedong, Uljugun, 2. Seodong, Ulsan City. 3. Ansachon, Uljugun, 4. Deogha, Uljugun, 5. Mangyangri, Uljugun.	미상	XRF	Geological map of study area and location of measured sites: 1. Daedong, Uljugun, 2. Seodong, Ulsan City. 3. Ansachon, Uljugun, 4. Deogha, Uljugun, 5. Mangyangri, Uljugun.	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2101	1~9	Stratigraphic section of the Banyeonri Formation, Daedong, Uljugun.	미상	XRF	Stratigraphic section of the Banyeonri Formation, Daedong, Uljugun.	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2102	1~9	Stratigraphic section of the Sihhwari Formation, Seodong, Ulsan.	미상	XRF	Stratigraphic section of the Sihhwari Formation, Seodong, Ulsan.	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2103	1~9	Lithofacies and calcrete features of the Sinhwari Formation, Seodong, Ulsan. Scale bars in C, D, and F are 0.5 mm, and scale bars in E and F are 0.1 mm and 1 mm, respectively. A; Crevasse channel/splay sandstone interbedded in floodplain mudstone. Sandstone has erosive base and grades upward into mudstone. B; Lenticular to nodular calcretes occurring in flood- plain mudstone. C; Micrite rims around detrital quartz grains (thin section). D; Tubular to vuggy pores filled with sparite and some peloids (thin section). E; Calcite aureoles around detrital quartz grains (thin section). F; Circumgranular cracks (arrows) (thin section). G; Calcrete ooid showing differential downward growth (etched rock slab).	미상	XRF	Lithofacies and calcrete features of the Sinhwari Formation, Seodong, Ulsan. Scale bars in C, D, and F are 0.5 mm, and scale bars in E and F are 0.1 mm and 1 mm, respectively. A; Crevasse channel/splay sandstone interbedded in floodplain mudstone. Sandstone has erosive base and grades upward into mudstone. B; Lenticular to nodular calcretes occurring in flood- plain mudstone. C; Micrite rims around detrital quartz grains (thin section). D; Tubular to vuggy pores filled with sparite and some peloids (thin section). E; Calcite aureoles around detrital quartz grains (thin section). F; Circumgranular cracks (arrows) (thin section). G; Calcrete ooid showing differential downward growth (etched rock slab).	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2104	1~9	Stratigraphic section of the Sinhwari Formation, Ansachon, Uljugun	미상	XRF	Stratigraphic section of the Sinhwari Formation, Ansachon, Uljugun	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2105	1~9	Lithofacies and calcrete occurrence of the Sinhwari Formation, Ansachon, Uljugun. A; Alternation of thin-bedded sand- stone and mudstone. B; Rhizocretional nodule occurring in floodplain mudstone.	미상	XRF	Lithofacies and calcrete occurrence of the Sinhwari Formation, Ansachon, Uljugun. A; Alternation of thin-bedded sand- stone and mudstone. B; Rhizocretional nodule occurring in	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2106	1~9	Stratigraphic section of the Sinhwari Formation, Deogha, Uljugun.	미상	XRF	Stratigraphic section of the Sinhwari Formation, Deogha, Uljugun.	울산시 부근의 경상누층군에 발달한 캄브리아기의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831

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2107	1~9	Lithofades and calcrete features of the Sinhwari Formation, Deogha, Uljugun. Scale bars in E and D are 1 mm. A; Alt- ernation of channel and crevasse channel/splay sandstone and floodplain mudstone. Floodplain deposits increase upward in thickness. B; Erosive contact between channel sandstone above and floodplain mudstone below. C; Composite paleosol profile consisting of nodular calcretes. D; Rhizocretional nodule (arrow). E; Circumgranular crack (arrow) and grading of micrite into sparite (upper part) (thin section). F; Root cast filled with sandy mudstone and relics of root (thin section).	미상	XRF	Lithofades and calcrete features of the Sinhwari Formation, Deogha, Uljugun. Scale bars in E and D are 1 mm. A; Alt- ernation of channel and crevasse channel/splay sandstone and floodplain mudstone. Floodplain deposits increase upward in thickness. B; Erosive contact between channel sandstone above and floodplain mudstone below. C; Composite paleosol profile consisting of nodular calcretes. D; Rhizocretional nodule (arrow). E; Circumgranular crack (arrow) and grading of micrite into sparite (upper part) (thin section). F; Root cast filled with sandy mudstone and relics of root (thin section).	울산시 부근의 경상누층군에 발달한 캅크리트의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2108	1~9	Stratigraphic section of the Sinhwari Formation, Mangyangri, Uljugun.	미상	XRF	Stratigraphic section of the Sinhwari Formation, Mangyangri, Uljugun.	울산시 부근의 경상누층군에 발달한 캅크리트의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2109	1~9	Lithofacies and calcrete features of the Sinhwari Formation, Mangyangri, Uljugun. Scale bars in C and F are 0.5 mm, and scale bars in D, E and G are 1 mm. A; Crevasse channel deposit (arrow) interbedded in calcrete-bearing floodplain mud- stone. B; Composite paleosol profile. C; Sepic plasmic fabric in mudstone (thin section). D; Tubular pores filled with sparite (etched rock slab). E; Stromatactis pore filled with sparite (etched rock slab). F; Calcrete ooid (etched rock slab). G. Rosette aggregates of calcite psudomorphs (thin section).	미상	XRF	Lithofacies and calcrete features of the Sinhwari Formation, Mangyangri, Uljugun. Scale bars in C and F are 0.5 mm, and scale bars in D, E and G are 1 mm. A; Crevasse channel deposit (arrow) interbedded in calcrete-bearing floodplain mud- stone. B; Composite paleosol profile. C; Sepic plasmic fabric in mudstone (thin section). D; Tubular pores filled with sparite (etched rock slab). E; Stromatactis pore filled with sparite (etched rock slab). F; Calcrete ooid (etched rock slab). G. Rosette aggregates of calcite psudomorphs (thin section).	울산시 부근의 경상누층군에 발달한 캅크리트의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2110	1~9	Chemical analyses of the calcretes from the Gyeongsang Supergroup, Ulsan area (unit: %).	미상	XRF	Chemical analyses of the calcretes from the Gyeongsang Supergroup, Ulsan area (unit: %).	울산시 부근의 경상누층군에 발달한 캅크리트의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2111	1~9	Summary of depositional and pedogenic characteristics of the measured outcrops of site 2 (Seodong), site 4 (Deogha), and site 5 (Mangyangri).	미상	XRF	Summary of depositional and pedogenic characteristics of the measured outcrops of site 2 (Seodong), site 4 (Deogha), and site 5 (Mangyangri).	울산시 부근의 경상누층군에 발달한 캅크리트의 기원과 층서적 의미(자원환경지질 Econ_v31n5p431)	35.743933 129.056831; 35.743933 129.451839; 35.302253 129.451839; 35.302253 129.056831
2112	Barren pegmatite, U and Th rich pegmatite	Plots of Na ₂ O+K ₂ O versus SiO ₂ (after Irvine and Baragar, 1977) for the Kyemyeongsan pegmatite.	미상	XRF, ICP-MS	Plots of Na ₂ O+K ₂ O versus SiO ₂ (after Irvine and Baragar, 1977) for the Kyemyeongsan pegmatite.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2113	Barren pegmatite, U and Th rich pegmatite	Ternary Rb-Ba-Sr diagram for the Kyemyeongsan pegmatites (after Bouseily and Sokkary, 1975). 1; diorite, 2; granodiorite and quartz diorite, 3; anomalous granite, 4; normal granite, 5; strongly differenciaded granite.	미상	XRF, ICP-MS	Ternary Rb-Ba-Sr diagram for the Kyemyeongsan pegmatites (after Bouseily and Sokkary, 1975). 1; diorite, 2; granodiorite and quartz diorite, 3; anomalous granite, 4; normal granite, 5; strongly differenciaded granite.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2114	Barren pegmatite, U and Th rich pegmatite	Chondrite-normalized (after Boynton, 1984) REE patterns for the Kyemyeongsan pegmatites, and allanite vein (after Park and Kim, 1995) and alkali granite (after Kim et al., 1998).	미상	XRF, ICP-MS	Chondrite-normalized (after Boynton, 1984) REE patterns for the Kyemyeongsan pegmatites, and allanite vein (after Park and Kim, 1995) and alkali granite (after Kim et al., 1998).	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2115	Barren pegmatite, U and Th rich pegmatite	Paragenetic sequence of identified minerals in the Kyemyeongsan pegmatite.	미상	XRF, ICP-MS	Paragenetic sequence of identified minerals in the Kyemyeongsan pegmatite.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2116	Barren pegmatite, U and Th rich pegmatite	A; Back-scattered electron image (BEI) of U- and Th-bearing minerals. A; Coarse-grained euxenite (ex) showing minute fergusonite (fg) inclusions. Thorite (tr) and uranpyrochlore (up) are closely associated with euxenite. Late silicates (black) replace the marginal part of euxenites. B; Lenticular-shaped fergusonite (fg) in euxenite (ex) matrix, showing irregular hydrothermal alteration. C; BEI-photomicrograph showing discontinuously zoned euxenite. Note that the light part is more enriched in Nb and Y contents. D; Subhedral uranpyrochlore (up) in microcline matrix, showing hydrothermal alteration along grain boundary and fractures. Thorite (tr) is closely associated with uranpyrochlore.	미상	XRF, ICP-MS	A; Back-scattered electron image (BEI) of U- and Th-bearing minerals. A; Coarse-grained euxenite (ex) showing minute fergusonite (fg) inclusions. Thorite (tr) and uranpyrochlore (up) are closely associated with euxenite. Late silicates (black) replace the marginal part of euxenites. B; Lenticular-shaped fergusonite (fg) in euxenite (ex) matrix, showing irregular hydrothermal alteration. C; BEI-photomicrograph showing discontinuously zoned euxenite. Note that the light part is more enriched in Nb and Y contents. D; Subhedral uranpyrochlore (up) in microcline matrix, showing hydrothermal alteration along grain boundary and fractures. Thorite (tr) is	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2117	Barren pegmatite, U and Th rich pegmatite	BEI-photomicrograph of discontinuously zoned thorite grain. Note that the U and Th contents are enriched in core (light parts).	미상	XRF, ICP-MS	BEI-photomicrograph of discontinuously zoned thorite grain. Note that the U and Th contents are enriched in core (light parts).	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2118	Barren pegmatite, U and Th rich pegmatite	Compositional variati에 of U-Th-bearing minerals from the Kyemyeongsan pegmatite, open circle; thorite, closed circle; uranpyrochlore, open square; fergusonite, closed square; euxenite.	미상	XRF, ICP-MS	Compositional variati에 of U-Th-bearing minerals from the Kyemyeongsan pegmatite, open circle; thorite, closed circle; uranpyrochlore, open square; fergusonite, closed square; euxenite.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2119	Barren pegmatite, U and Th rich pegmatite	Chemical composition of pegmatites in the Kyemyeongsan Formation.	미상	XRF, ICP-MS	Chemical composition of pegmatites in the Kyemyeongsan Formation.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2120	Barren pegmatite, U and Th rich pegmatite	Chemical composition and calculated formular of thorite and fergusonite from the Kyemyeongsan pegmatite.	미상	XRF, ICP-MS	Chemical composition and calculated formular of thorite and fergusonite from the Kyemyeongsan pegmatite.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2121	Barren pegmatite, U and Th rich pegmatite	Chemical composition and calculated formula of euxenite and uranopyrochlore from the Kyemyeongsan pegmatite.	미상	XRF, ICP-MS	Chemical composition and calculated formula of euxenite and uranopyrochlore from the Kyemyeongsan pegmatite.	계명산층 페그마타이트에 수반되는 우라늄·토륨 광상의 지구화학적 특성(자원환경지질 Econ_v31n5p365)	38.950000 127.874167
2122	Baegjeon	Geologic map of the Baegjeon deposits area L Open pits and prospecting sites, 2; Basic dyke, 3; Dumudong Formation, 4; Dongjeom Quartzite Formation, 5; Hwajeol Formation, 6; Pungchon Limestone Formation, 7; Bedding, 8; Fault, 9, Adits.	미상	EPMA, 안정동위원소	Geologic map of the Baegjeon deposits area L Open pits and prospecting sites, 2; Basic dyke, 3; Dumudong Formation, 4; Dongjeom Quartzite Formation, 5; Hwajeol Formation, 6; Pungchon Limestone Formation, 7; Bedding, 8; Fault, 9, Adits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2123	Baegjeon	Semi-log diagram shows chemical variations of oolitic limestone in the upper-most Pungchon Limestone Formation near the Baegjeon deposits. Vertical bars show ranges in ppm of various rock type such as 1; Fresh limestone (Graf, 1960), 2; Unmineralized oolitic limestone, 3; silicified oolitic limestone, 4; Highly mineralized oolitic limestone.	미상	EPMA, 안정동위원소	Semi-log diagram shows chemical variations of oolitic limestone in the upper-most Pungchon Limestone Formation near the Baegjeon deposits. Vertical bars show ranges in ppm of various rock type such as 1; Fresh limestone (Graf, 1960), 2; Unmineralized oolitic limestone, 3; silicified oolitic limestone, 4; Highly mineralized oolitic limestone.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2124	Baegjeon	Photomicrographs of mineralized oolitic limestone of the upper-most Pungchon Limestone Formation from the Baegjeon deposits area. A; oolites composed of recrystallized euhedral dolomite and arsenopyrite (black), B; oolites showing recrystallized euhedral dolomite and pyrite (black), C; Weekly mineralized oolites showing recrystallized euhedral dolomite, D; Oolite showing replacement by pyrite. Scale bars=500 µm.	미상	EPMA, 안정동위원소	Photomicrographs of mineralized oolitic limestone of the upper-most Pungchon Limestone Formation from the Baegjeon deposits area. A; oolites composed of recrystallized euhedral dolomite and arsenopyrite (black), B; oolites showing recrystallized euhedral dolomite and pyrite (black), C; Weekly mineralized oolites showing recrystallized euhedral dolomite, D; Oolite showing replacement by pyrite. Scale bars=500 µm.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2125	Baegjeon	Paragenetic sequence of minerals from the Baegjeon deposits.	미상	EPMA, 안정동위원소	Paragenetic sequence of minerals from the Baegjeon deposits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2126	Baegjeon	Mode of occurrence and schematic drawing of fluid inclusions in quartz from the Baegjeon deposits. The quartz shows zoning and that homogenization temperature of pyramid in quartz is higher than the bottom of quartz.	미상	EPMA, 안정동위원소	Mode of occurrence and schematic drawing of fluid inclusions in quartz from the Baegjeon deposits. The quartz shows zoning and that homogenization temperature of pyramid in quartz is higher	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2127	Baegjeon	Relationship between salinities and homogenization temperatures of fluid inclusions from the Baegjeon deposits. I, II and m; type, I, II and in inclusions.	미상	EPMA, 안정동위원소	Relationship between salinities and homogenization temperatures of fluid inclusions from the Baegjeon deposits. I, II and m; type, I, II and in inclusions.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2128	Baegjeon	Diagram of sulfur fugacity and temperature showing the possible range at bhck area suggested by Ag atomic fraction in electrum and FeS mole fraction in sphalerites assemblages from the Baegjeon deposits. Data plotted on diagram given in Barton and Toulmin (1964) and Shikazono (1985).	미상	EPMA, 안정동위원소	Diagram of sulfur fugacity and temperature showing the possible range at bhck area suggested by Ag atomic fraction in electrum and FeS mole fraction in sphalerites assemblages from the Baegjeon deposits. Data plotted on diagram given in Barton and Toulmin (1964) and Shikazono (1985).	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2129	Baegjeon	Diagram plotted on 3D versus $\delta^{18}O$ showing calculated composition obtained ore fluids of fluid inclusions in quartz and muscovite from the Baegjeon deposits. Data of Dunjeon is referred by Lee (1993) and the Carlin is Radtke et al., (1980).	미상	EPMA, 안정동위원소	Diagram plotted on 3D versus $\delta^{18}O$ showing calculated composition obtained ore fluids of fluid inclusions in quartz and muscovite from the Baegjeon deposits. Data of Dunjeon is referred by Lee (1993) and the Carlin is Radtke et al., (1980).	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2130	Baegjeon	Representative average content (ppm) of indicate element for the Au-Ag mineralization of the Carlin, Tennessee Pass and Baegjeon deposits.	미상	EPMA, 안정동위원소	Representative average content (ppm) of indicate element for the Au-Ag mineralization of the Carlin, Tennessee Pass and Baegjeon deposits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2131	Baegjeon	Representative chemical composition of arsenopyrite analyzed by EPMA from the Baegjeon deposits.	미상	EPMA, 안정동위원소	Representative chemical composition of arsenopyrite analyzed by EPMA from the Baegjeon deposits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2132	Baegjeon	Representative chemical composition of sphalerite analyzed by EPMA from the Baegjeon deposits.	미상	EPMA, 안정동위원소	Representative chemical composition of sphalerite analyzed by EPMA from the Baegjeon deposits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2133	Baegjeon	Representative chemical composition of electrum analyzed by EPMA from the Baegjeon deposits.	미상	EPMA, 안정동위원소	Representative chemical composition of electrum analyzed by EPMA from the Baegjeon deposits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2134	Baegjeon	Stable isotopic composition(δ) in sulfide, carbonate and silicate minerals from the Baegjeon deposits.	미상	EPMA, 안정동위원소	Stable isotopic composition(δ) in sulfide, carbonate and silicate minerals from the Baegjeon deposits.	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2135	Baegjeon	Comparison of the characteristics of mineralization and depositional condition among the Carlin-type, Tennessee Pass, Dunjeon South and Baegjeon deposits.	미상	EPMA, 안정동위원소	Comparison of the characteristics of mineralization and depositional condition among the Carlin-type, Tennessee Pass, Dunjeon South and	탄산염암 층준교대형 백전광상의 천열수 금·은 광화작용과 생성환경(자원환경지질 Econ_v29n2p105)	37.321319 128.855767; 37.321319 128.894819; 37.235886 128.894819; 37.235886 128.855767
2136	JS 1~23, SS1~9	The SPICE (Steptoean Positive Carbon Isotope Excursion) in Laurentia, an increase in $\delta^{13}C$ values of marine carbonate above their background value of - 1 to +1‰ VPDB to a maximum of +4 to +5‰; the peak of $\delta^{13}C$ values coincides with sequence boundary (Glumac, 2011).	미상	탄소 안정동위원소 연대측정	The SPICE (Steptoean Positive Carbon Isotope Excursion) in Laurentia, an increase in $\delta^{13}C$ values of marine carbonate above their background value of - 1 to +1‰ VPDB to a maximum of +4 to +5‰; the peak of $\delta^{13}C$ values coincides with sequence boundary (Glumac, 2011).	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2137	JS 1~23, SS1~9	Location and geologic maps. Index map (A) showing the location of and geology of the Taebaeksan Basin with the location of Taebaek area in rectangle (B). Jikdong and Sagundari sections are shown in road map of the Taebaek area (C).	미상	탄소 안정동위원소 연대측정	Location and geologic maps. Index map (A) showing the location of and geology of the Taebaeksan Basin with the location of Taebaek area in rectangle (B). Jikdong and Sagundari sections are shown in road map of the Taebaek area	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022
2138	JS 1~23, SS1~9	Stratigraphic column of the Sesong Formation combined by the Jikdong (0 to 50 m) and Sagundari sections (60 to 69 m). The stratigraphic interval between the Jikdong and Sagundary sections is currently uncertain, and thus the thickness of this interval is speculative. At the bottom of the column S represents siliciclastic rocks and C carbonate rocks; for siliciclastic rocks, M represents mudstone, VF to VC represent very fine- to very coarse-grained sandstone whereas for carbonate rocks M to G lime mudstone to grainstone and P flat pebble conglomerate. Lithofacies code is as follows: Ml laminated mudstone, Fn nodular shale, Sl laminated sandstone, Sm massive sandstone, Sm (cal) calcareous massive sandstone, Cl limestone conglomerate, and L-S limestone-shale couplet.	미상	탄소 안정동위원소 연대측정	Stratigraphic column of the Sesong Formation combined by the Jikdong (0 to 50 m) and Sagundari sections (60 to 69 m). The stratigraphic interval between the Jikdong and Sagundary sections is currently uncertain, and thus the thickness of this interval is speculative. At the bottom of the column S represents siliciclastic rocks and C carbonate rocks; for siliciclastic rocks, M represents mudstone, VF to VC represent very fine- to very coarse-grained sandstone whereas for carbonate rocks M to G lime mudstone to grainstone and P flat pebble conglomerate. Lithofacies code is as follows: Ml laminated mudstone, Fn nodular shale, Sl laminated sandstone, Sm massive sandstone, Sm (cal) calcareous massive sandstone, Cl limestone conglomerate, and L-S	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022
2139	JS 1~23, SS1~9	Summary diagram of lithology, trilobite biostratigraphy, sequence stratigraphy, stable carbon and oxygen isotope curves, and relative sea-level curve of the Sesong Formation. Trilobite biostratigraphy is based on Park and Choi (2011). The SPICE occurs in the lower part of the Paibian Stage. Maximum positive excursion of stable carbon isotope value is interpreted to coincide with a correlative conformity which is thought to have been formed during the maximum lowstand of relative sea level. The lower and upper boundaries of the Paibian Stage are indentified by trilobite biozones. Abbreviations in sequence stratigraphy are as follows; DS represents drowning surface, TST transgressive systems tract, HST highstand systems tract, CC correlative conformity, and MFS marine flooding surface.	미상	탄소 안정동위원소 연대측정	Summary diagram of lithology, trilobite biostratigraphy, sequence stratigraphy, stable carbon and oxygen isotope curves, and relative sea-level curve of the Sesong Formation. Trilobite biostratigraphy is based on Park and Choi (2011). The SPICE occurs in the lower part of the Paibian Stage. Maximum positive excursion of stable carbon isotope value is interpreted to coincide with a correlative conformity which is thought to have been formed during the maximum lowstand of relative sea level. The lower and upper boundaries of the Paibian Stage are indentified by trilobite biozones. Abbreviations in sequence stratigraphy are as follows; DS represents drowning surface, TST transgressive systems tract, HST highstand systems tract, CC	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2140	JS 1~23, SS1~9	Comparison of SPICE in Laurentia, China and Korea. Carbon isotope excursion curves of Laurentia, South China and North China are modified from Lee et al. (2015).	미상	탄소 안정동위원소 연대측정	Comparison of SPICE in Laurentia, China and Korea. Carbon isotope excursion curves of Laurentia, South China and North China are modified from Lee et al. (2015).	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022
2141	JS 1~23, SS1~9	Lithofacies of the Sesong Formation	미상	탄소 안정동위원소 연대측정	Lithofacies of the Sesong Formation	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022
2142	JS 1~23, SS1~9	Values of stable carbon and oxygen isotopes of samples in the Jikdong and Sagundari sections of the Sesong Formation	미상	탄소 안정동위원소 연대측정	Values of stable carbon and oxygen isotopes of samples in the Jikdong and Sagundari sections of the Sesong Formation	태백산 분지 캄브리아기 세송층의 암상과 안정 탄소 동위원소 층서(지구과학회지 Earth_v36n7p617)	37.176061 128.768325 37.076736 129.043022
2143	Hd-1a/1b/2/3a/3b/3c/3d/3e/3t	The simplified geologic map showing the locations of sampling sites.	미상	K-Ar	The simplified geologic map showing the locations of sampling sites.	화순 서유리의 백악기 화석산지에 대한 K-Ar 연대(지구과학회지 Earth_v33n7p618)	35.16945 127.090439
2144	Hd-1a/1b/2/3a/3b/3c/3d/3e/3t	Whole rock K-Ar ages of the volcanic rocks from Jangdongri Formation	미상	K-Ar	Whole rock K-Ar ages of the volcanic rocks from Jangdongri Formation	화순 서유리의 백악기 화석산지에 대한 K-Ar 연대(지구과학회지 Earth_v33n7p618)	35.16945 127.090439
2145	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	The geologic map of the Gwangyang-Hadong area (after Hong and Hwang, 1984, Son et al., 1964, You et al., 1993, Nam et al., 1989, Lee et al., 1989, Park et al., 1989) showing sample locations.	미상	EPMA, ICP	The geologic map of the Gwangyang-Hadong area (after Hong and Hwang, 1984, Son et al., 1964, You et al., 1993, Nam et al., 1989, Lee et al., 1989, Park et al., 1989) showing sample locations.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2146	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Major elements vs. SiO ₂ for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Major elements vs. SiO ₂ for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2147	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Na ₂ O vs. K ₂ O and K ₂ O+Na ₂ O vs. CaO for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Na ₂ O vs. K ₂ O and K ₂ O+Na ₂ O vs. CaO for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2148	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Total alkali vs. silica diagram for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Total alkali vs. silica diagram for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2149	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Molar ratio Al ₂ O ₃ /(CaO + Na ₂ O+K ₂ O) vs. SiO ₂ for the gneisses of the Gwangyang-Hadong area. Boundary between I- and S-type is after Hine et al. (1978). ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Molar ratio Al ₂ O ₃ /(CaO + Na ₂ O+K ₂ O) vs. SiO ₂ for the gneisses of the Gwangyang-Hadong area. Boundary between I- and S-type is after Hine et al. (1978). ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2150	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Tectonic discrimination diagram for the gneisses of the Gwangyang-Hadong (Bachelor and Bowden, 1985) and Seungju-Suncheon area (Ahn et al., 2001).	미상	EPMA, ICP	Tectonic discrimination diagram for the gneisses of the Gwangyang-Hadong (Bachelor and Bowden, 1985) and Seungju-Suncheon area (Ahn et al., 2001).	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2151	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Trace elements vs. SiO ₂ for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Trace elements vs. SiO ₂ for the gneisses of the Gwangyang-Hadong area. ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2152	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Tectonic discrimination diagram (Y and Nb vs. SiO ₂) for the gneisses of the Gwangyang-Hadong area (Pearce et al., 1984). Abbreviations: VAG (volcanic arc granite), COLG (collisional granite), ORG (oceanic ridge granite), WPG (within plate granite). ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Tectonic discrimination diagram (Y and Nb vs. SiO ₂) for the gneisses of the Gwangyang-Hadong area (Pearce et al., 1984). Abbreviations: VAG (volcanic arc granite), COLG (collisional granite), ORG (oceanic ridge granite), WPG (within plate granite). ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2153	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Tectonic discrimination diagram (Nb vs. Y) for the gneisses of the Gwangyang-Hadong area (Pearce et al., 1984). Abbreviation: syn-COLG (syn-collisional granite) and others are the same as in Fig. 9. ○: granitic gneiss, ●: porphyroblastic gneiss.	미상	EPMA, ICP	Tectonic discrimination diagram (Nb vs. Y) for the gneisses of the Gwangyang-Hadong area (Pearce et al., 1984). Abbreviation: syn-COLG (syn-collisional granite) and others are the same as in Fig. 9. ○: granitic gneiss, ●: porphyroblastic gneiss.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2154	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Chondrite-normalized (by Wood et al., 1979) REE patterns for the gneisses of the Gwangyang-Hadong area.	미상	EPMA, ICP	Chondrite-normalized (by Wood et al., 1979) REE patterns for the gneisses of the Gwangyang-Hadong area.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2155	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	The compositions of garnets from the gneisses of the Gwangyang-Hadong area in the Mg-Fe-(Ca+Mn) ternary diagram	미상	EPMA, ICP	The compositions of garnets from the gneisses of the Gwangyang-Hadong area in the Mg-Fe-(Ca+Mn) ternary diagram	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2156	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	The compositional profile of garnet from the gneisses of the Gwangyang-Hadong area. (a) GW125, (b) BF75-3, (c) HA10b, (d) BF71-2.	미상	EPMA, ICP	The compositional profile of garnet from the gneisses of the Gwangyang-Hadong area. (a) GW125, (b) BF75-3, (c) HA10b, (d) BF71-2.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2157	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	The composition of biotite from gneisses of the Gwangyang-Hadong area in AlIV-XFe diagram.	미상	EPMA, ICP	The composition of biotite from gneisses of the Gwangyang-Hadong area in AlIV-XFe diagram.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2158	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	The compositions of plagioclases from the gneiss of the Gwangyang-Hadong area in the Or-Ab-An ternary diagram.	미상	EPMA, ICP	The compositions of plagioclases from the gneiss of the Gwangyang-Hadong area in the Or-Ab-An ternary diagram.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2159	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Metamorphic map of the Gwangyang-Hadong area from the gneisses (SCZ: sillimanite-cordierite zone, SZ: sillimanite zone, GZ: garnet zone, BZ: biotite zone).	미상	EPMA, ICP	Metamorphic map of the Gwangyang-Hadong area from the gneisses (SCZ: sillimanite-cordierite zone, SZ: sillimanite zone, GZ: garnet zone, BZ: biotite zone).	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2160	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	The P-T conditions of the gneisses in the Gwangyang-Hadong area (phase boundary of Al ₂ SiO ₅ from Holdaway, 1971).	미상	EPMA, ICP	The P-T conditions of the gneisses in the Gwangyang-Hadong area (phase boundary of Al ₂ SiO ₅ from Holdaway, 1971).	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2161	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	P-T-t path of the study area deduced from the metamorphic conditions of the gneisses of the Gwangyang-Hadong area.	미상	EPMA, ICP	P-T-t path of the study area deduced from the metamorphic conditions of the gneisses of the Gwangyang-Hadong area.	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2162	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Chemical compositions of the major, trace and rare earth elements for the gneisses of the Gwangyang-Hadong area	미상	EPMA, ICP	Chemical compositions of the major, trace and rare earth elements for the gneisses of the Gwangyang-Hadong area	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2163	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Representative compositions of garnets from the gneiss of the Gwangyang-Hadong area	미상	EPMA, ICP	Representative compositions of garnets from the gneiss of the Gwangyang-Hadong area	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2164	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Representative compositions of biotites from the gneiss of the Gwangyang-Hadong area	미상	EPMA, ICP	Representative compositions of biotites from the gneiss of the Gwangyang-Hadong area	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2165	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	Representative compositions of plagioclases from the gneiss of the Gwangyang-Hadong area	미상	EPMA, ICP	Representative compositions of plagioclases from the gneiss of the Gwangyang-Hadong area	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2166	GW125, BF75-3, HA10b, BF71-2, GW103-3, HI-2, HA15, BF75-2, BF71, GW15	P-T estimates for the gneisses of the Gwangyang-Hadong area	미상	EPMA, ICP	P-T estimates for the gneisses of the Gwangyang-Hadong area	광양-하동지역에 분포하는 편마암류의 지구화학 및 변성작용(지구과학회지 Earth_v29n3p221)	35.333333 127.166667; 35.333333 127.833333; 34.833333 127.833333; 34.833333 127.166667
2167	B-1~3, B2-1~7, 729-1~6	Geological map of the Seongsan-Ilchulbong area (modified from Won et al., 1995). [1, Pyoseon-ri lava; 2, Seongsan-ri lava (B1, lower lava; B2, upper lava; S, spatter cone); 3, Ilchulbong tuff; 4, Ilchulbong reworked tuff (Re) and Sinyang-ri Formation (S); 5, Eolian dune sand (d) and beach sand and reclaimed area.]	미상	XRF, ICP-MS	Geological map of the Seongsan-Ilchulbong area (modified from Won et al., 1995). [1, Pyoseon-ri lava; 2, Seongsan-ri lava (B1, lower lava; B2, upper lava; S, spatter cone); 3, Ilchulbong tuff; 4, Ilchulbong reworked tuff (Re) and Sinyang-ri Formation (S); 5, Eolian dune sand (d) and beach sand and reclaimed area.]	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2168	B-1~3, B2-1~7, 729-1~6	Strikes and dips of tuff beds and lava flows in the Seongsan-Ilchulbong area.	미상	XRF, ICP-MS	Strikes and dips of tuff beds and lava flows in the Seongsan-Ilchulbong area.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2169	B-1~3, B2-1~7, 729-1~6	Sketch section of lava flows in Stop 1, 2 and 3 of the Seongsan-Ilchulbong area (heavy dot with number shows sample locality and numbers represent separated lava flow unit). Stop 1, 2 and 3 are shown in Fig. 1. [small open circle: lapillistone and scoria, small filled circle: clinker]	미상	XRF, ICP-MS	Sketch section of lava flows in Stop 1, 2 and 3 of the Seongsan-Ilchulbong area (heavy dot with number shows sample locality and numbers represent separated lava flow unit). Stop 1, 2 and 3 are shown in Fig. 1. [small open circle: lapillistone and scoria, small filled circle: clinker]	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2170	B-1~3, B2-1~7, 729-1~6	(a) Total alkali vs. SiO ₂ (wt.%) (Le Bas et al., 1986) plot of the basaltic rocks in the Seongsan-Ilchulbong area. The dividing line between alkali (A) and sub-alkalic (SA) magma series is from Irvine and Baragar (1971). Line F-G is division for tholeiitic and alkaline rocks in Hawaii (Macdonald and Katsura, 1964) and (b) Alkali Index (A.I.) vs. Al ₂ O ₃ (wt.%) for the classification of tholeiitic (TH) and calc- alkaline basalts (CAB) (Middlemost, 1975). Symbols [○, tholeiitic basalt in Seongsan-ri lava; ●, alkalic basalt in Seongsan-ri lava; ◇, Pyoseon-ri lava]	미상	XRF, ICP-MS	(a) Total alkali vs. SiO ₂ (wt.%) (Le Bas et al., 1986) plot of the basaltic rocks in the Seongsan-Ilchulbong area. The dividing line between alkali (A) and sub-alkalic (SA) magma series is from Irvine and Baragar (1971). Line F-G is division for tholeiitic and alkaline rocks in Hawaii (Macdonald and Katsura, 1964) and (b) Alkali Index (A.I.) vs. Al ₂ O ₃ (wt.%) for the classification of tholeiitic (TH) and calc- alkaline basalts (CAB) (Middlemost, 1975). Symbols [○, tholeiitic basalt in Seongsan-ri lava; ●, alkalic basalt in Seongsan-ri lava; ◇, Pyoseon-ri lava]	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2171	B-1~3, B2-1~7, 729-1~6	K ₂ O vs. Na ₂ O (wt.%) plot diagram for basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 4.	미상	XRF, ICP-MS	K ₂ O vs. Na ₂ O (wt.%) plot diagram for basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 4.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2172	B-1~3, B2-1~7, 729-1~6	Harker variation diagrams of major oxide (wt.%) vs. MgO (wt.%) of the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 4. and [△ tholeiitic basalt from Lee(1998); ▲, alkalic basalt from Lee (1998) and Kim (2001)]	미상	XRF, ICP-MS	Harker variation diagrams of major oxide (wt.%) vs. MgO (wt.%) of the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 4. and [△ tholeiitic basalt from Lee(1998); ▲, alkalic basalt from Lee (1998) and Kim (2001)]	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2173	B-1~3, B2-1~7, 729-1~6	Collapse of the basalt tetrahedron into the 2-dimension diagram of normative components ne-ol-di-hy-qtz (Hyndman, 1985) of basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 4.	미상	XRF, ICP-MS	Collapse of the basalt tetrahedron into the 2-dimension diagram of normative components ne-ol-di-hy-qtz (Hyndman, 1985) of basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 4.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2174	B-1~3, B2-1~7, 729-1~6	Variation diagrams of incompatible elements against Th (ppm) of the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 6.	미상	XRF, ICP-MS	Variation diagrams of incompatible elements against Th (ppm) of the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2175	B-1~3, B2-1~7, 729-1~6	Variation diagrams of compatible elements (ppm) against MgO (wt.%) of the basaltic rocks in the SeongsanIlchulbong area. Symbols are the same as those in Fig. 6.	미상	XRF, ICP-MS	Variation diagrams of compatible elements (ppm) against MgO (wt.%) of the basaltic rocks in the SeongsanIlchulbong area. Symbols are the same as those in Fig. 6.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2176	B-1~3, B2-1~7, 729-1~6	Chondrite-normalized rare earth element patterns of the basaltic rocks in the Seongsan-Ilchulbong area (Taylor and McLennan, 1985). Symbols are the same as those in Fig. 4.	미상	XRF, ICP-MS	Chondrite-normalized rare earth element patterns of the basaltic rocks in the Seongsan-Ilchulbong area (Taylor and McLennan, 1985). Symbols are the same as those in Fig. 4.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2177	B-1~3, B2-1~7, 729-1~6	Primitive mantle-normalized spider diagram for basaltic rocks in the Seongsan-Ilchulbong area (Pearce, 1983). Symbols are the same as those in Fig. 4.	미상	XRF, ICP-MS	Primitive mantle-normalized spider diagram for basaltic rocks in the Seongsan-Ilchulbong area (Pearce, 1983). Symbols are the same as those in Fig. 4.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2178	B-1~3, B2-1~7, 729-1~6	Tectonic discrimination diagrams of the basaltic rocks in the Seongsan-Ilchulbong area. (a) Zr-Y-Ti diagram (Pearce and Cann, 1973), (b) TiO ₂ -MnO-P ₂ O ₅ diagram (Mullen, E.D., 1983), and (c) Hf-Th-Nb diagram (Wood, 1980). Symbols are the same as those in Fig. 4.	미상	XRF, ICP-MS	Tectonic discrimination diagrams of the basaltic rocks in the Seongsan-Ilchulbong area. (a) Zr-Y-Ti diagram (Pearce and Cann, 1973), (b) TiO ₂ -MnO-P ₂ O ₅ diagram (Mullen, E.D., 1983), and (c) Hf-Th-Nb diagram (Wood, 1980). Symbols are the same as those in Fig. 4.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2179	B-1~3, B2-1~7, 729-1~6	Variation diagrams showing different degree of partial melting for the basaltic rocks in the Seongsan-Ilchulbong area. (a) La vs. Ba (ppm), (b) La vs. Rb (ppm) and (c) La vs. Nb (ppm). Symbols are the same as those in Fig. 6.	미상	XRF, ICP-MS	Variation diagrams showing different degree of partial melting for the basaltic rocks in the Seongsan-Ilchulbong area. (a) La vs. Ba (ppm), (b) La vs. Rb (ppm) and (c) La vs. Nb (ppm). Symbols are the same as those in Fig. 6.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2180	B-1~3, B2-1~7, 729-1~6	MgO (wt.%) vs. (a) Y/Nb and (b) Zr/Nb diagram for the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 6.	미상	XRF, ICP-MS	MgO (wt.%) vs. (a) Y/Nb and (b) Zr/Nb diagram for the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 6.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2181	B-1~3, B2-1~7, 729-1~6	La vs. La/Sm diagram for the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 6.	미상	XRF, ICP-MS	La vs. La/Sm diagram for the basaltic rocks in the Seongsan-Ilchulbong area. Symbols are the same as those in Fig. 6.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2182	B-1~3, B2-1~7, 729-1~6	Outcrop of the volcanic center (small crater) which erupted B1 lavas. (a) Agglomerates around the crater wall, showing inward dipping of 80° and 20°. (b) Volcanic bombs. (c) Crater wall of inward dipping (80°) and lava flows (30°).	미상	XRF, ICP-MS	Outcrop of the volcanic center (small crater) which erupted B1 lavas. (a) Agglomerates around the crater wall, showing inward dipping of 80° and 20°. (b) Volcanic bombs. (c) Crater wall of inward dipping (80°) and lava flows	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2183	B-1~3, B2-1~7, 729-1~6	a. Outcrop of black scoria deposit with tuff (dipping 32°) of the spatter cone which erupted B2 lavas. b. Outcrop of the spatter cone which intercalates upper lavas of the Seongsan-ri basalt.	미상	XRF, ICP-MS	a. Outcrop of black scoria deposit with tuff (dipping 32°) of the spatter cone which erupted B2 lavas. b. Outcrop of the spatter cone which intercalates upper lavas of the Seongsan-ri basalt.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2184	B-1~3, B2-1~7, 729-1~6	Photomicrograph of the basalts of the Seongsan-Ilchulbong area. a. Tholeiitic basalt (sample, B2-7), showing the skeletal texture of olivine phenocryst (crossed polars). b. Tholeiitic basalt (sample, B-2), showing the skeletal texture of olivine phenocrysts (plane-polarized light). c. Tholeiitic basalt (sample, B2-6), showing the glomeroporphyritic texture of subhedral clinopyroxene phenocrysts (crossed polars). d. Tholeiitic basalt (sample, B-3), showing the iddingsite of olivine phenocryst (plane-polarized light). e. Tholeiitic basalt (sample, 729-6), showing the intergranular texture (plane-polarized light). f. Alkali basalt (sample, 729-1), showing the glassy groundmass resulted from rapid cooling (plane-polarized light). g. Tholeiitic basalt (sample, B-2), showing the intergranular texture (plane-polarized light). h. Alkali basalt (sample, 729-4), showing the glassy groundmass with small vesicle (plane-polarized light). Abbreviation: Ol = olivine, Cpx = clinopyroxene, and Pl = plagioclase. (Width of photo is about 2 mm)	미상	XRF, ICP-MS	Photomicrograph of the basalts of the Seongsan-Ilchulbong area. a. Tholeiitic basalt (sample, B2-7), showing the skeletal texture of olivine phenocryst (crossed polars). b. Tholeiitic basalt (sample, B-2), showing the skeletal texture of olivine phenocrysts (plane-polarized light). c. Tholeiitic basalt (sample, B2-6), showing the glomeroporphyritic texture of subhedral clinopyroxene phenocrysts (crossed polars). d. Tholeiitic basalt (sample, B-3), showing the iddingsite of olivine phenocryst (plane-polarized light). e. Tholeiitic basalt (sample, 729-6), showing the intergranular texture (plane-polarized light). f. Alkali basalt (sample, 729-1), showing the glassy groundmass resulted from rapid cooling (plane-polarized light). g. Tholeiitic basalt (sample, B-2), showing the intergranular texture (plane-polarized light). h. Alkali basalt (sample, 729-4), showing the glassy groundmass with small vesicle (plane-polarized light). Abbreviation: Ol = olivine, Cpx = clinopyroxene, and Pl = plagioclase.	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2185	B-1~3, B2-1~7, 729-1~6	Modal composition of the basaltic rock in the Seongsan-Ilchulbong area	미상	XRF, ICP-MS	Modal composition of the basaltic rock in the Seongsan-Ilchulbong area	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2186	B-1~3, B2-1~7, 729-1~6	Major element abundances (wt.%) and CIPW norm of the basaltic rocks in the Seongsan-Ilchulbong area	미상	XRF, ICP-MS	Major element abundances (wt.%) and CIPW norm of the basaltic rocks in the Seongsan-Ilchulbong area	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2187	B-1~3, B2-1~7, 729-1~6	Trace element abundances (ppm) of the basaltic rocks in the Seongsan-Ilchulbong area	미상	XRF, ICP-MS	Trace element abundances (ppm) of the basaltic rocks in the Seongsan-Ilchulbong area	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2188	B-1~3, B2-1~7, 729-1~6	Rare earth element abundances (ppm) of the basaltic rocks in the Seongsan-Ilchulbong area	미상	XRF, ICP-MS	Rare earth element abundances (ppm) of the basaltic rocks in the Seongsan-Ilchulbong area	제주도 성산일출봉 일대 현무암에 대한 암석학적 연구(지구과학회지 Earth_v28n3p324)	33.475000 126.925000; 33.475000 126.950000; 33.450000 126.950000; 33.450000 126.925000
2189	1~5	A view of the Samsung mine area.	미상	XRF, XRD, K/Ar	A view of the Samsung mine area.	삼성광산 일대의 건물모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v28n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656

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2190	1~5	Geological map of the Samsung mine area.	미상	XRF, XRD, K/Ar	Geological map of the Samsung mine area.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2191	1~5	An outcrop of mica schist showing well schistosity.	미상	XRF, XRD, K/Ar	An outcrop of mica schist showing well schistosity.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2192	1~5	An outcrop of biotite granite in the Samsung mine area.	미상	XRF, XRD, K/Ar	An outcrop of biotite granite in the Samsung mine area.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2193	1~5	Sericite ores showing gray in color. They are soft and yield whitish streak.	미상	XRF, XRD, K/Ar	Sericite ores showing gray in color. They are soft and yield whitish streak.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2194	1~5	Excavating site of Samsung mine. Sericite orebody is developed in the 5-10 m level below the surface.	미상	XRF, XRD, K/Ar	Excavating site of Samsung mine. Sericite orebody is developed in the 5-10 m level below the surface.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2195	1~5	Photomicrograph of granite-gneiss showing slight alteration of feldspars. Orthoclase (Or), quartz (Qz), plagioclase (Pl), biotite (Bt) are observed. Orthoclase is partly altered to sericite. Crossed nicols.	미상	XRF, XRD, K/Ar	Photomicrograph of granite-gneiss showing slight alteration of feldspars. Orthoclase (Or), quartz (Qz), plagioclase (Pl), biotite (Bt) are observed. Orthoclase is partly altered to sericite. Crossed	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2196	1~5	Photomicrograph of granite-gneiss showing moderate alteration of feldspars. Quartz (Qz), plagioclase (Pl), biotite (Bt) are observed. Orthoclase is entirely altered to sericite (Sr). Crossed nicols	미상	XRF, XRD, K/Ar	Photomicrograph of granite-gneiss showing moderate alteration of feldspars. Quartz (Qz), plagioclase (Pl), biotite (Bt) are observed. Orthoclase is entirely altered to sericite (Sr). Crossed	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2197	1~5	Photomicrograph of granite-gneiss showing moderate sericitization. Plagioclase(Pl) is strongly altered to sericite. Quartz(Qz) is seen. Crossed nicols.	미상	XRF, XRD, K/Ar	Photomicrograph of granite-gneiss showing moderate sericitization. Plagioclase(Pl) is strongly altered to sericite. Quartz(Qz) is seen. Crossed nicols.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2198	1~5	Photomicrograph of granite-gneiss with intensive alteration. Remnants of biotite(Bt) flakes are seen in the sericite matrix. Crossed nicols.	미상	XRF, XRD, K/Ar	Photomicrograph of granite-gneiss with intensive alteration. Remnants of biotite(Bt) flakes are seen in the sericite matrix. Crossed nicols.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2199	1~5	Another photomicrograph of granite-gneiss showing the intensive sericitization. Quartz(Qz) grains have been dissolved along the outlines of quartz grains. Crossed nicols.	미상	XRF, XRD, K/Ar	Another photomicrograph of granite-gneiss showing the intensive sericitization. Quartz(Qz) grains have been dissolved along the outlines of quartz grains. Crossed nicols.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2200	1~5	Photomicrograph of sericite ore. Most of the host rock-forming minerals have been altered to sericite. Numerous minute grains of quartz, calcite, and some opaque minerals are visible within the matrix. Crossed nicols.	미상	XRF, XRD, K/Ar	Photomicrograph of sericite ore. Most of the host rock-forming minerals have been altered to sericite. Numerous minute grains of quartz, calcite, and some opaque minerals are visible within the matrix. Crossed nicols.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2201	1~5	X-ray powder diffractograms showing the gradual changes with alteration intensity of host rocks. 1: unaltered granite-gneiss, 2: slightly altered granite-gneiss, 3: moderately altered granite-gneiss, 4: intensively altered granite-gneiss, 5: sericite ore. p: plagioclase, o: orthoclase, q: quartz, s: sericite.	미상	XRF, XRD, K/Ar	X-ray powder diffractograms showing the gradual changes with alteration intensity of host rocks. 1: unaltered granite-gneiss, 2: slightly altered granite-gneiss, 3: moderately altered granite-gneiss, 4: intensively altered granite-gneiss, 5: sericite ore. p: plagioclase, o: orthoclase, q: quartz, s: sericite.	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2202	1~5	Bulk chemical compositions (wt.%) of various rocks in the Samsung mine area	미상	XRF, XRD, K/Ar	Bulk chemical compositions (wt.%) of various rocks in the Samsung mine area	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2203	1~5	Electron microprobe analyses (wt.%) of sericites from Samsung mine	미상	XRF, XRD, K/Ar	Electron microprobe analyses (wt.%) of sericites from Samsung mine	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2204	1~5	X-ray powder diffraction data of sericite from the Samsung mine	미상	XRF, XRD, K/Ar	X-ray powder diffraction data of sericite from the Samsung mine	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2205	1~5	Chemical compositions (wt.%) of host rock (granite-gneiss) and different altered sericite ores	미상	XRF, XRD, K/Ar	Chemical compositions (wt.%) of host rock (granite-gneiss) and different altered sericite ores	삼성광산 일대의 건운모광화작용에 대한 광물학적 및 성인적 연구(지구과학회지 Earth_v26n7p674)	36.474639 126.931656; 36.474639 126.950119; 36.458258 126.950119; 36.458258 126.931656
2206	O1~3, S1~7	Photomicrographs of some Chungnam serpentinites showing original minerals such as olivines (Ol), pyroxene (Px) and serpentine (Srp).	미상	EPMA	Photomicrographs of some Chungnam serpentinites showing original minerals such as olivines (Ol), pyroxene (Px) and serpentine (Srp).	충남지역 사문암내 감람석과 휘석의 사문 석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2207	O1~3, S1~7	Photomicrograph of serpentinite showing the points of analyses along the scanning line fix)m olivine (O1-O3) to serpentine (S1-S7).	미상	EPMA	Photomicrograph of serpentinite showing the points of analyses along the scanning line fix)m olivine (O1-O3) to serpentine (S1-S7).	충남지역 사문암내 감람석과 휘석의 사문 석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2208	O1~3, S1~7	Variation of each ion content from olivine to serpentine in Fig. 3 and Table 1 (A) and enlarged diagram of values under 10% from above diagram A (B).	미상	EPMA	Variation of each ion content from olivine to serpentine in Fig. 3 and Table 1 (A) and enlarged diagram of values under 10% from above diagram A (B).	충남지역 사문암내 감람석과 휘석의 사문 석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2209	O1~3, S1~7	Photomicrograph of serpentinites showing the points of analyses along the scanning line from pyroxene (P1-P3) to serpentine (S1-S6).	미상	EPMA	Photomicrograph of serpentinites showing the points of analyses along the scanning line from pyroxene (P1-P3) to serpentine (S1-S6).	충남지역 사문암내 감람석과 휘석의 사문 석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2210	O1~3, S1~7	Variation of each content from olivine to serpentine in Fig. 5 and Table 3.	미상	EPMA	Variation of each content from olivine to serpentine in Fig. 5 and Table 3.	충남지역 사문암내 감람석과 휘석의 사문석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2211	O1~3, S1~7	Electron microprobe analyses along the scanning line from olivine to serpentine in above Fig. 3	미상	EPMA	Electron microprobe analyses along the scanning line from olivine to serpentine in above Fig. 3	충남지역 사문암내 감람석과 휘석의 사문석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2212	O1~3, S1~7	Each ion content (%) calculated from Table 1	미상	EPMA	Each ion content (%) calculated from Table 1	충남지역 사문암내 감람석과 휘석의 사문석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2213	O1~3, S1~7	Electron microprobe analyses along the scanning line from pyroxene to serpentine in Fig. 5	미상	EPMA	Electron microprobe analyses along the scanning line from pyroxene to serpentine in Fig. 5	충남지역 사문암내 감람석과 휘석의 사문석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2214	O1~3, S1~7	Each ion content (%) calculated from Table 3	미상	EPMA	Each ion content (%) calculated from Table 3	충남지역 사문암내 감람석과 휘석의 사문석화작용(지구과학회지 Earth_v26n3p297)	37.116667 125.516667; 37.116667 127.466667; 35.966667 127.466667; 35.966667 125.516667
2215	GD3~36, K5~12	Geologic map of the northern Gohung area (after Choi, 2002) and sample location.	미상	EPMA, ICP	Geologic map of the northern Gohung area (after Choi, 2002) and sample location.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2216	GD3~36, K5~12	Major elements vs. SiO ₂ for gneisses of the northern Gohung area. Ggn: granitic gneiss, Pgn: porphyroblastic gneiss, Mgn: migmatitic gneiss.	미상	EPMA, ICP	Major elements vs. SiO ₂ for gneisses of the northern Gohung area. Ggn: granitic gneiss, Pgn: porphyroblastic gneiss, Mgn: migmatitic gneiss.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2217	GD3~36, K5~12	Na ₂ O vs. K ₂ O for the gneisses of the northern Gohung area (White and Chappell, 1983).	미상	EPMA, ICP	Na ₂ O vs. K ₂ O for the gneisses of the northern Gohung area (White and Chappell, 1983).	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2218	GD3~36, K5~12	K ₂ O+Na ₂ O vs. CaO for the gneisses of the northern Gohung area.	미상	EPMA, ICP	K ₂ O+Na ₂ O vs. CaO for the gneisses of the northern Gohung area.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2219	GD3~36, K5~12	Total alkali vs. silica diagram for the gneisses of the northern Gohung area (Wilson, 1989).	미상	EPMA, ICP	Total alkali vs. silica diagram for the gneisses of the northern Gohung area (Wilson, 1989).	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2220	GD3~36, K5~12	Molar ratio Al ₂ O ₃ /(CaO + Na ₂ O+K ₂ O) vs. SiO ₂ for the gneisses of the northern Gohung area. Boundary between I- and S-type is Hine et al. (1978).	미상	EPMA, ICP	Molar ratio Al ₂ O ₃ /(CaO + Na ₂ O+K ₂ O) vs. SiO ₂ for the gneisses of the northern Gohung area. Boundary between I- and S-type is Hine et al. (1978).	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2221	GD3~36, K5~12	Tectonic discrimination diagram for the gneisses of the northern Gohung area (Bachelor and Bowden, 1985).	미상	EPMA, ICP	Tectonic discrimination diagram for the gneisses of the northern Gohung area (Bachelor and Bowden, 1985).	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2222	GD3~36, K5~12	Trace elements vs. SiO ₂ for gneisses of the northern Gohung area.	미상	EPMA, ICP	Trace elements vs. SiO ₂ for gneisses of the northern Gohung area.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2223	GD3~36, K5~12	Tectonic discrimination diagram (Y vs. SiO ₂) for the gneisses of the northern Gohung area (Pearce et al., 1984). Abbreviation: VAG (volcanic arc granite), COLG (collisional granite), ORG (oceanic ridge granite), WPG (within plate granite).	미상	EPMA, ICP	Tectonic discrimination diagram (Y vs. SiO ₂) for the gneisses of the northern Gohung area (Pearce et al., 1984). Abbreviation: VAG (volcanic arc granite), COLG (collisional granite), ORG (oceanic ridge granite), WPG (within plate	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2224	GD3~36, K5~12	Chondrite-normalized (by Wood et al., 1979) REE patterns for the gneisses of the northern Gohung area.	미상	EPMA, ICP	Chondrite-normalized (by Wood et al., 1979) REE patterns for the gneisses of the northern Gohung area.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2225	GD3~36, K5~12	The compositions of garnets from gneisses of the northern Gohung area in the Mg-Fe-(Ca + Mn) ternary diagram.	미상	EPMA, ICP	The compositions of garnets from gneisses of the northern Gohung area in the Mg-Fe-(Ca + Mn) ternary diagram.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2226	GD3~36, K5~12	The compositional profile of garnet from the gneisses of the northern Gohung area. (a) GO30D, (b) GO21A, (c) GO23-1A. (d) GO32, (e) K5A.	미상	EPMA, ICP	The compositional profile of garnet from the gneisses of the northern Gohung area. (a) GO30D, (b) GO21A, (c) GO23-1A. (d) GO32, (e) K5A.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2227	GD3~36, K5~12	The composition of biotite from gneisses of the northern Gohung area in AlIV-XFe diagram.	미상	EPMA, ICP	The composition of biotite from gneisses of the northern Gohung area in AlIV-XFe diagram.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2228	GD3~36, K5~12	The compositions of plagioclases from gneisses of the northern Gohung area in the Or-Ab-An ternary diagram.	미상	EPMA, ICP	The compositions of plagioclases from gneisses of the northern Gohung area in the Or-Ab-An ternary diagram.	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2229	GD3~36, K5~12	The P-T conditions of the gneisses in northern Gohung area (phase boundary of Al ₂ SiO ₅ from Holdaway, 1971).	미상	EPMA, ICP	The P-T conditions of the gneisses in northern Gohung area (phase boundary of Al ₂ SiO ₅ from Holdaway, 1971).	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2230	GD3~36, K5~12	Chemical compositions of the major, trace and rare earth elements for gneisses of the northern Gohung area	미상	EPMA, ICP	Chemical compositions of the major, trace and rare earth elements for gneisses of the northern Gohung area	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2231	GD3~36, K5~12	Representative compositions of garnets from gneisses of the northern Gohung area	미상	EPMA, ICP	Representative compositions of garnets from gneisses of the northern Gohung area	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2232	GD3~36, K5~12	Representative compositions of biotites from gneisses of the northern Gohung area	미상	EPMA, ICP	Representative compositions of biotites from gneisses of the northern Gohung area	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2233	GD3~36, K5~12	Representative compositions of plagioclase from gneisses of the northern Gohung area	미상	EPMA, ICP	Representative compositions of plagioclase from gneisses of the northern Gohung area	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2234	GD3~36, K5~12	Chemical compositions of cordierites from gneisses of the northern Gohung area	미상	EPMA, ICP	Chemical compositions of cordierites from gneisses of the northern Gohung area	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2235	GD3~36, K5~12	P-T estimates for gneisses of the northern Gohung area	미상	EPMA, ICP	P-T estimates for gneisses of the northern Gohung area	전라남도 고흥 북부지역에 분포하는 편마암류의 변성작용에 관한 연구(지구과학회지 Earth_v25n6p443)	34.761917 127.059631; 34.761917 127.430881; 34.512483 127.430881; 34.512483 127.059631
2236	G58/45/68, S3	Simplified geological map of the study area.	미상	EPMA, XRF	Simplified geological map of the study area.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2237	G58/45/68, S3	The outcrop of charnockitic rock showing waxy luster and dark gray or green colors.	미상	EPMA, XRF	The outcrop of charnockitic rock showing waxy luster and dark gray or green colors.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2238	G58/45/68, S3	Photomicrograph of charnockitic rock showing mineral assemblage with plagioclase-K-feldspar-orthopyroxene-quartz-garnet (under crossed polars). (Opx: orthopyroxene, Grt: garnet, Kfs: K-feldspar Pl: plagioclase)	미상	EPMA, XRF	Photomicrograph of charnockitic rock showing mineral assemblage with plagioclase-K-feldspar-orthopyroxene-quartz-garnet (under crossed polars). (Opx: orthopyroxene, Grt: garnet, Kfs: K-feldspar Pl: plagioclase)	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2239	G58/45/68, S3	Photomicrograph of orthopyroxene replaced to anthophyllite.	미상	EPMA, XRF	Photomicrograph of orthopyroxene replaced to anthophyllite.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2240	G58/45/68, S3	Photomicrograph of orthopyroxene with polygonal texture (under crossed polars).	미상	EPMA, XRF	Photomicrograph of orthopyroxene with polygonal texture (under crossed polars).	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2241	G58/45/68, S3	Compositions of orthopyroxene plotted in triangular diagram of Wo-En-Fs system.	미상	EPMA, XRF	Compositions of orthopyroxene plotted in triangular diagram of Wo-En-Fs system.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2242	G58/45/68, S3	Compositional zoning profile of garnet (G68) of the charnockitic rock in the study area.	미상	EPMA, XRF	Compositional zoning profile of garnet (G68) of the charnockitic rock in the study area.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2243	G58/45/68, S3	(A) Norm An-Ab-Or ternary diagram (from O'Connor, 1965) and (B) plots of composition in the total alkali vs. SiO ₂ diagram(from Cox et al., 1987). Symbols are the same as those in the appendix 1 and crosses represent charnockite.	미상	EPMA, XRF	(A) Norm An-Ab-Or ternary diagram (from O'Connor, 1965) and (B) plots of composition in the total alkali vs. SiO ₂ diagram(from Cox et al., 1987). Symbols are the same as those in the appendix 1 and crosses represent charnockite.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261

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메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2244	G58/45/68, S3	Harker variation diagrams of major oxides in charnockites and gneisses in the study area. Symbols are the same as the those in the Fig. 9.	미상	EPMA, XRF	Harker variation diagrams of major oxides in charnockites and gneisses in the study area. Symbols are the same as the those in the Fig. 9.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2245	G58/45/68, S3	Spider diagrams of primitive mantle-normalized trace element abundances for the rocks in the study area. Symbols are the same as the those in the Fig. 9. (A) anorthositic rock and hornblende gneiss (B) leucocratic granite gneiss and granoblastite (C) biotite gneiss and biotite-hornblende gneiss (D) charnockite	미상	EPMA, XRF	Spider diagrams of primitive mantle-normalized trace element abundances for the rocks in the study area. Symbols are the same as the those in the Fig. 9. (A) anorthositic rock and hornblende gneiss (B) leucocratic granite gneiss and granoblastite (C) biotite gneiss and biotite-hornblende gneiss (D)	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2246	G58/45/68, S3	Chondrite-normalized rare earth element abundance patterns for the rocks in the study area. Symbols are the same as the those in the Fig. 9. (A) anorthositic rock and hornblende gneiss (B) leucocratic granite gneiss and granoblastite (C) biotite gneiss and biotite-hornblende gneiss (D) charnockite	미상	EPMA, XRF	Chondrite-normalized rare earth element abundance patterns for the rocks in the study area. Symbols are the same as the those in the Fig. 9. (A) anorthositic rock and hornblende gneiss (B) leucocratic granite gneiss and granoblastite (C) biotite gneiss and biotite-hornblende gneiss (D)	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2247	G58/45/68, S3	Representative composition of orthopyroxene of the charnockite in the study area	미상	EPMA, XRF	Representative composition of orthopyroxene of the charnockite in the study area	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2248	G58/45/68, S3	Representative composition of garnet of the charnockite in the study area	미상	EPMA, XRF	Representative composition of garnet of the charnockite in the study area	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2249	G58/45/68, S3	Major element composition and CIPW normative mineral composition of the charnockite in the study area	미상	EPMA, XRF	Major element composition and CIPW normative mineral composition of the charnockite in the study area	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2250	G58/45/68, S3	Trace element and rare earth element abundances (ppm) of the charnockite in the study area	미상	EPMA, XRF	Trace element and rare earth element abundances (ppm) of the charnockite in the study area	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2251	G58/45/68, S3	Estimated metamorphic temperatures (°C) calculated from orthopyroxene-garnet geothermometer (G68) of the charnockite in the study area	미상	EPMA, XRF	Estimated metamorphic temperatures (°C) calculated from orthopyroxene-garnet geothermometer (G68) of the charnockite in the study area	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2252	G58/45/68, S3	Estimated metamorphic pressure (Kbar) calculated from plagioclase-garnet geobarometer (G68) of the charnockite in the study area.	미상	EPMA, XRF	Estimated metamorphic pressure (Kbar) calculated from plagioclase-garnet geobarometer (G68) of the charnockite in the study area.	산청지역에 분포하는 차노카이트의 암석학적 연구(지구과학회지 Earth_v25n4p251)	35.372219 127.862261; 35.372219 127.972825; 35.249931 127.972825; 35.249931 127.862261
2253	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Simplified geological map of the study area (modified after Lee et al., 1981, 1997, 1999; Kim et al., 1998)	미상	EPMA, XRF	Simplified geological map of the study area (modified after Lee et al., 1981, 1997, 1999; Kim et al., 1998)	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2254	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Map of the distrubution and sample localities of the porphyroblastic gneiss from the SW Sobaegsan massif (C-10, K-16, S-09, S-10: Granitic gneiss).	미상	EPMA, XRF	Map of the distrubution and sample localities of the porphyroblastic gneiss from the SW Sobaegsan massif (C-10, K-16, S-09, S-10: Granitic gneiss).	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2255	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Photographs of outcrops showing: (A) Metasediment enclave suirounded by the BPGN; (B) Close-up of the enclave in photo (A) showing no megacryst of alkali feldspar. (C), (D) Small enclaves of metasediment included in BPGN from Hakdong. En: enclave of metasediment.	미상	EPMA, XRF	Photographs of outcrops showing: (A) Metasediment enclave suirounded by the BPGN; (B) Close-up of the enclave in photo (A) showing no megacryst of alkali feldspar. (C), (D) Small enclaves of metasediment included in BPGN from Hakdong. En: enclave of metasediment.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2256	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	TAS (from Cox et al., 1987) diagram. Symbols are the same as those in table 5.	미상	EPMA, XRF	TAS (from Cox et al., 1987) diagram. Symbols are the same as those in table 5.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2257	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	The Harker diagrams showing the variation of major oxides in the BPGN. Symbols are the same as those in table 5.	미상	EPMA, XRF	The Harker diagrams showing the variation of major oxides in the BPGN. Symbols are the same as those in table 5.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2258	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	AFM ternary (from Irvine and Baragar, 1971). Symbols are the same as those in table 5.	미상	EPMA, XRF	AFM ternary (from Irvine and Baragar, 1971). Symbols are the same as those in table 5.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2259	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Diagrams of (A) A/NK-A/CNK (from Mani ar and Piccoli, 1989) and (B) Na2O-K2O (from White and Chappell, 1977). Symbols are the same as those in table 5.	미상	EPMA, XRF	Diagrams of (A) A/NK-A/CNK (from Mani ar and Piccoli, 1989) and (B) Na2O-K2O (from White and Chappell, 1977). Symbols are the same as those in table 5.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2260	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Spider diagrams of primitive mantle-nonnalzed trace element abundance patterns for the BPGN. Symbols are the same as those in table 6.	미상	EPMA, XRF	Spider diagrams of primitive mantle-nonnalzed trace element abundance patterns for the BPGN. Symbols are the same as those in table 6.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2261	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Relationships of (A) Sr-Rb and (B) Rb/Sr-Rb for the BPGN of showing negative relation of Sr and positive Rb/Sr against to Rb. Symbols are the same as those in table 6.	미상	EPMA, XRF	Relationships of (A) Sr-Rb and (B) Rb/Sr-Rb for the BPGN of showing negative relation of Sr and positive Rb/Sr against to Rb. Symbols are the same as those in table 6.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2262	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Variation diagrams of (A) Rb, Ba and Sr vs. K2O (wt%) and (B) CaO (wt%) for the BPGN. Symbols are the same as those in table 6.	미상	EPMA, XRF	Variation diagrams of (A) Rb, Ba and Sr vs. K2O (wt%) and (B) CaO (wt%) for the BPGN. Symbols are the same as those in table 6.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2263	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Chondrite-normalized rare earth element abundance patterns of the BPGN. Symbols are the same as those in table 7.	미상	EPMA, XRF	Chondrite-normalized rare earth element abundance patterns of the BPGN. Symbols are the same as those in table 7.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2264	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Representative chemical compositions and structural formulae of biotite.	미상	EPMA, XRF	Representative chemical compositions and structural formulae of biotite.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497

학술논문자료 시료등록 메타데이터 목록

메타순서	시료ID*	제목*	분석장비명 및 모델*	분석방법	자료설명	참고문헌	좌표*
2265	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Representative chemical compositions and structural formulae of garnets.	미상	EPMA, XRF	Representative chemical compositions and structural formulae of garnets.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2266	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Representative chemical compositions and structural formulae of plagioclases.	미상	EPMA, XRF	Representative chemical compositions and structural formulae of plagioclases.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2267	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Representative chemical compositions and structural formulae of alkali feldspars.	미상	EPMA, XRF	Representative chemical compositions and structural formulae of alkali feldspars.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2268	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Major elements composition and calculated CIPW normative mineral compositions of the blastoporphyrritic granite gneiss	미상	EPMA, XRF	Major elements composition and calculated CIPW normative mineral compositions of the blastoporphyrritic granite gneiss	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2269	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Trace elements abundance of the blastoporphyrritic granite gneiss.	미상	EPMA, XRF	Trace elements abundance of the blastoporphyrritic granite gneiss.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497
2270	C-01~20, S-1~10, P-01~06, H-01~7, K-01~20	Rare earth elements abundance of the blastoporphyrritic granite gneiss.	미상	EPMA, XRF	Rare earth elements abundance of the blastoporphyrritic granite gneiss.	소백산육괴 서남부의 잔류반상 화강편마암의 암석학적 연구(지구과학회지 Earth_v22n6p528)	35.462561 127.179497; 35.462561 127.966183; 34.887475 127.966183; 34.887475 127.179497