

Sample Results Summary Sheet

Please return this form to the Curator for each allocated Sample

Sample ID: RA-QD02-0013

PI: Tomoki Nakamura

Type and date of analysis performed:

XRD Jan/28/2011~ Feb/3/2011

FE-SEM, FE-EPMA Feb/19/2011~ Feb/28/2011

Elements or phases identified: (Mg, Si, olivine, pyroxene, aromatic carbon, etc.)

XRD : Ol, Pl, LPx, HPx

FE-SEM : Ol, Pl, LPx, HPx, Chr, K-fd

FE-EPMA : Si, Ti, Al, Fe, Mn, Mg, Ca, Na, K, Cr, Ni, P, S

Contaminant phases identified: (Al, SUS, carbon particles, etc.)

N/A

Sample handling:

XRD

Attached to carbon fiber with resin.

FE-SEM, FE-EPMA

Exposed in atmosphere.

Polished by M cross

C-coated (20 nm)

State of sample pre-analysis:

Attached to carbon fiber with resin. (XRD)

Polished section with resin embedded (FE-SEM, FE-EPMA)

State of sample post-analysis:

Attached to carbon fiber with resin. (XRD)

Polished section with resin embedded, C-coated (FE-SEM, FE-EPMA)

N₂ hold in sample holder.

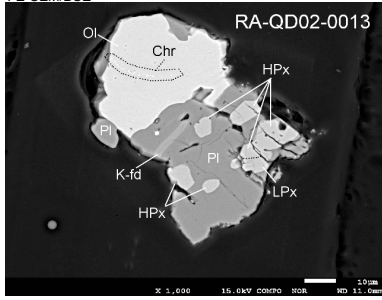
Analysis data Notes: (summary of the attached analysis data and/or images)

See attached sheets.

RA-QD02-0013

Analysis S-XRD (polish) FE-SEM FE-EPMA
 Present status Putted butt

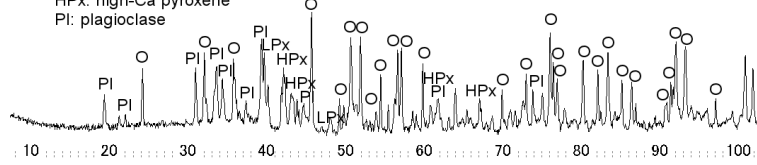
FE-SEM/BSE



S-XRD

Itokawa RA-QD02-0013

O: olivine
 LPx: low-Ca pyroxene
 HPx: high-Ca pyroxene
 Pl: plagioclase



FE-EPMA

wt%	Olivine n=8	OI 1 sigma	LPx n=5	.Px 1 sigma	HPx n=10	HPx 1 sigma	Plagio n=1	PI 1 sigma	K feld n=5	PI 1 sigma
SiO2	37.19	0.33	54.42	0.21	53.60	0.58	65.35	0.90	64.64	0.29
TiO2	0.02	0.02	0.13	0.02	0.39	0.06	0.06	0.07	0.06	0.08
Al2O3	0.02	0.02	0.20	0.04	0.49	0.05	20.29	0.41	19.20	0.19
FeO	26.17	0.21	15.33	0.11	4.68	0.25	0.29	0.17	0.40	0.07
MnO	0.46	0.08	0.44	0.01	0.21	0.05	0.03	0.04	0.01	0.03
MgO	36.82	0.44	28.50	0.22	16.42	0.22	0.10	0.17	0.02	0.02
CaO	0.01	0.01	0.55	0.06	22.49	0.35	2.06	0.34	1.46	0.17
Na2O	0.02	0.03	0.03	0.02	0.49	0.03	9.61	0.30	1.60	0.14
K2O	0.01	0.02	0.00	0.01	0.02	0.02	0.84	0.20	13.80	0.30
Cr2O3	0.01	0.01	0.05	0.05	0.57	0.06	0.02	0.02	0.03	0.03
NiO	0.03	0.03	0.02	0.03	0.01	0.01	0.02	0.03	0.09	0.04
P2O5	0.01	0.01	0.00	0.00	0.01	0.02	0.09	0.09	0.02	0.05
SO3	0.01	0.02	0.00	0.00	0.02	0.02	0.04	0.04	0.02	0.02
Total	100.77	0.30	99.68	0.33	99.38	0.79	98.79	1.06	101.32	0.64
SUM										

Comment

Olivine (Fa#)	28.51	0.29								
LPx(Fs#)			22.94	0.07						
LPx(Wo#)			1.05	0.12						
LPx(En#)			76.01	0.09						
HPx(Fs#)					7.46	0.40				
HPx(Wo#)					45.91	0.52				
HPx(En#)					46.64	0.36				
Pl(Or#)							4.88	1.20	79.07	1.59
Pl(An#)							10.08	1.65	7.03	0.74
Pl(Ab#)							85.04	1.50	13.90	1.13