

## Sample Results Summary Sheet

Please return this form to the Curator for each allocated Sample

**Sample ID:** RA-QD02-0042

**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 : LPx, PI

FE-SEM : LPx, Tr, PI

FE-EPMA : Si, Ti, Al, Fe, Mn, Mg, Ca, Na, K, Cr, 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)

N<sub>2</sub> hold in sample holder.

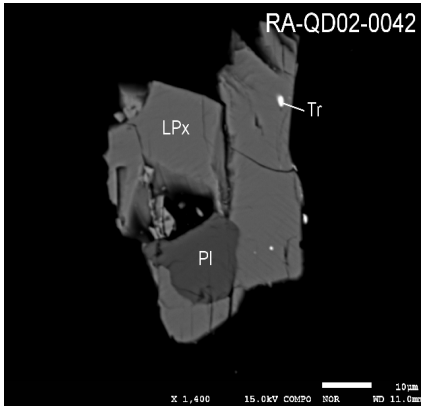
**Analysis data Notes:** (summary of the attached analysis data and/or images)

See attached sheets.

# RA-QD02-0042

Analysis S-XRD (polish) FE-SEM FE-EPMA  
 Present status Putted butt with some SIMS spots

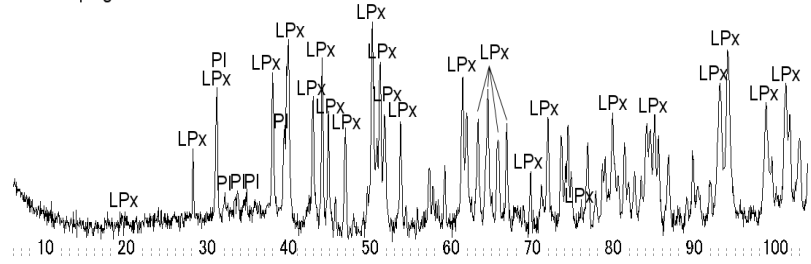
FE-SEM/BSE



S-XRD

## Itokawa RA-QD02-0042

LPx: low-Ca pyroxene  
 Pl: plagioclase



FE-EPMA

wt%	Olivine n=0Ol 1 sigma	LPx n=16 .Px 1 sigma	HPx n=0 HPx 1 sigma	Plagio n=4 Pl 1 sigma
SiO2	55.59	0.79	67.18	0.61
TiO2	0.16	0.05	0.04	0.05
Al2O3	0.16	0.03	20.20	0.22
FeO	16.19	0.23	0.41	0.04
MnO	0.46	0.05	0.03	0.05
MgO	27.19	0.38	0.00	0.00
CaO	0.76	0.14	2.19	0.20
Na2O	0.02	0.02	9.20	0.10
K2O	0.01	0.01	1.11	0.09
Cr2O3	0.08	0.04	0.03	0.06
NiO	0.01	0.02	0.01	0.02
P2O5	0.02	0.03	0.05	0.04
SO3	0.03	0.10	0.09	0.07
Total	100.66	0.73	100.55	0.75

SUM

Comment

Olivine (Fa#)			
LPx(Fs#)	24.67	0.45	
LPx(Wo#)	1.47	0.27	
LPx(En#)	73.85	0.43	
HPx(Fs#)			
HPx(Wo#)			
HPx(En#)			
Pl(Or#)		6.56	0.62
Pl(An#)		10.88	0.93
Pl(Ab#)		82.56	0.53