

## Sample Results Summary Sheet

Please return this form to the Curator for each allocated Sample

**Sample ID:** RA-QD02-0027

**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 : Pl, Tr, LPx

FE-SEM : Pl, Tr, Ol

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.

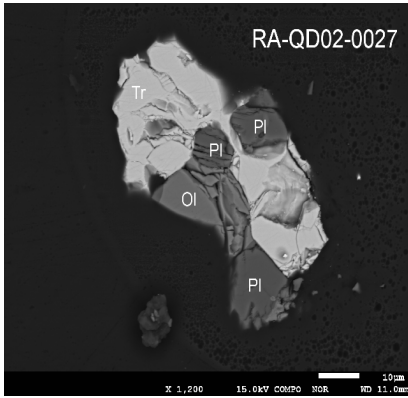
**Analysis data Notes:** (summary of the attached analysis data and/or images)

See attached sheets.

# RA-QD02-0027

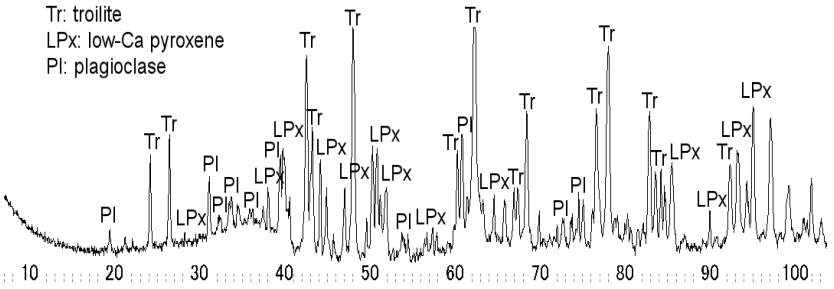
Analysis S-XRD (polish) FE-SEM FE-EPMA  
 Present status Putted butt with some SIMS spots

FE-SEM/BSE



S-XRD

## Itokawa RA-QD002-0027



FE-EPMA

| wt%   | Olivine n=1 sigma | LPx n=0 .Px 1 sigma | HPx n=0 1Px 1 sigma | plagio n=1(P1 1 sigma) |
|-------|-------------------|---------------------|---------------------|------------------------|
| SiO2  | 39.05             | 0.35                |                     | 66.71                  |
| TiO2  | 0.00              | 0.00                |                     | 0.04                   |
| Al2O3 | 0.02              | 0.02                |                     | 19.82                  |
| FeO   | 26.49             | 0.24                |                     | 0.80                   |
| MnO   | 0.47              | 0.06                |                     | 0.02                   |
| MgO   | 36.07             | 0.92                |                     | 0.08                   |
| CaO   | 0.01              | 0.01                |                     | 2.09                   |
| Na2O  | 0.03              | 0.01                |                     | 10.11                  |
| K2O   | 0.01              | 0.01                |                     | 0.70                   |
| Cr2O3 | 0.03              | 0.05                |                     | 0.04                   |
| NiO   | 0.02              | 0.03                |                     | 0.01                   |
| P2O5  | 0.13              | 0.18                |                     | 0.06                   |
| SO3   | 0.13              | 0.06                |                     | 0.19                   |
| Total | 102.46            | 0.95                |                     | 100.67                 |

SUM

Comment

|               |       |      |
|---------------|-------|------|
| Olivine (Fa#) | 29.18 | 0.46 |
| LPx(Fs#)      |       |      |
| LPx(Wo#)      |       |      |
| LPx(En#)      |       |      |
| HPx(Fs#)      |       |      |
| HPx(Wo#)      |       |      |
| HPx(En#)      |       |      |
| Pl(Or#)       | 3.96  | 0.78 |
| Pl(An#)       | 9.84  | 0.40 |
| Pl(Ab#)       | 86.20 | 0.97 |