ISSN 2433-2232(Online)
JAXA-SP-22-004E

JAXA Special Publication

Hayabusa2 Asteroid Sample Catalog 2022

January 2023

Japan Aerospace Exploration Agency

JAXA-SP-22-004E

Hayabusa2 Asteroid Sample Catalog 2022

CONTENTS

Hayabusa2-returned sample catalog 2022

YADA Toru, NISHIMURA Masahiro, ABE Masanao, OKADA Tatsuaki, YOGATA Kasumi, SAKAMOTO Kanako, MIYAZAKI Akiko, NAGASHIMA Kana, KANEMARU Rei, TAHARA Rui, NAKANO Arisa, OJIMA Tomoko, FUKAI Ryota, ISHIZAKI Takuya, HATAKEDA Kentaro, KUMAGAI Kazuya, HITOMI Yuya, SOEJIMA Hiromichi, SUGIYAMA Yuka, SUGAHARA Haruna, SUZUKI Shino, TACHIBANA Shogo, USUI Tomohiro ……..……..1

Hayabusa2-returned sample catalog 2022

YADA Toru[1], NISHIMURA Masahiro[1], ABE Masanao[1],
OKADA Tatsuaki[1], YOGATA Kasumi[1], SAKAMOTO Kanako[1],
MIYAZAKI Akiko[1], NAGASHIMA Kana[1], KANEMARU Rei[1],
TAHARA Rui[1], NAKANO Arisa[1], OJIMA Tomoko[1], FUKAI Ryota[1],
ISHIZAKI Takuya[1], HATAKEDA Kentaro[1], KUMAGAI Kazuya[1],
HITOMI Yuya[1], SOEJIMA Hiromichi[1], SUGIYAMA Yuka[1],
SUGAHARA Haruna[1], SUZUKI Shino[1],
TACHIBANA Shogo[1] and USUI Tomohiro[1]

[1]Astromaterials Science Research Group, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, 3-1-1, Yoshinodai, Chuo-ku, Sagamihara, Kanagawa 252-5210, JAPAN.

This catalog aims to present the latest sample list published on the Ryugu Sample Database (https://www.darts.isas.jaxa.jp/curation/hayabusa2/) and Hayabusa2 related curatorial activities from November 2021 to October 2022.

1. Ryugu Sample Database

As of the end of October 2022, a total of 1807 samples is published on the Ryugu Sample Database (Table 1), which includes unprocessed individual grains and particle aggregates (652), samples once allocated and returned from Initial Analysis teams (1127), gas samples collected from the sample container at Quick Look Facility and subdivided into smaller gas bottles at JAXA curation (20), and others such as artificial materials (8).

In addition to 393 particles published in the database in November 2021, a total of 259 samples, 180 (170 individual grains and 10 aggregate samples) from chamber A and 79 (70 individual grains and 9 aggregate samples) from chamber C were transferred to sample containers for description in the clean chamber. The samples are now available in the database.

Twenty eight samples (21 individual grains and 7 aggregate samples) were delivered to NASA Johnson Space Center in December 2021 according to the MOU between NASA and JAXA. Nine samples (4 individual grains and 5 aggregate samples) were allocated to Phase2 curation of Kochi in March 2022. Seventy-four individual grains were approved by the Hayabusa2 Sample Allocation Committee (HSAC) to be allocated for the first Announcement Opportunity (AO) for

Hayabusa2 samples. As of the end of October 2022, approximately 1.2 g of the samples were allocated to the Hayabusa2 project team for initial analysis, Phase2 curation, the first AO, and NASA. About 4.0 g of samples are kept in pure nitrogen gas inside the Hayabusa2 clean chamber system.

Samples allocated to the Hayabusa2 Initial Analysis team, where ~0.3 g of the samples were analyzed for one year from June 2021, were returned to JAXA from June to August 2022. Thirty-two samples (22 individual grains and 10 aggregate samples), allocated to the Initial Analysis team, were processed for various analyses and returned as >1000 samples in different shapes such as particles, polished sections, FIB sections, microtome sections, and liquid solvents. Currently, 1127 samples are published on the web database.

2. Announcement of Opportunity (AO) for Hayabusa2 samples

The first AO for Ryugu grains was held with the schedule below:

December 7, 2021	Call for proposals
January 13, 2022	Sample database release
March 25, 2022	Notice of Intent (NOI) due
April 22, 2022	Sample request submission due
May 16, 2022	Review submission due
May 20-27, 2022	AO panel discussion
June, 2022	Sample distribution

Applicants were requested to declare their intent (Notice of Intent) first through registration to the online proposal submission system and to submit the proposals that describe the research objective, research plan with analytical procedures, required samples, and analytical feasibility.

Each proposal was peer-reviewed by 3-4 external reviewers. Each reviewer was asked to review three proposals. The AO panel committee then discussed all the proposals taking the review comments into account, and made a recommendation list for sample allocation. The recommendation list was discussed and approved by the HSAC. The results of the first AO is summarized below:

Submitted proposals: 57
Asia, Oceania 23/ North America 11/ Europe 23
Early career (less than 7 years after Ph.D.) 7

External reviewers: 64
Asia, Oceania 33/ North America 21/ Europe 10
Male 47/ Female 17

Accepted proposals: 40
Rate of selection: 70% (40/57)
Allocated samples: 74 grains (42 from chamber A, 32 from chamber C)
All the available samples for the first AO were allocated.

3. Other activities

3-1. Modification of the FT-IR system

FT-IR system used for the initial description of Ryugu samples was upgraded in January 2022. Narrow-band MCT detector and ceramic light source were additionally installed to extend the measurable wavelength range from 5 to 8.5 μm. The viewport window on the sample chamber was replaced from sapphire glass to calcium fluoride (CaF_2) glass for transmitting the light of longer wavelength.

3-2. Installation of automated sample stage moving system to the FT-IR chamber

Motor-driven XY sample stage system and equipment to transport a sample from the main clean chamber (CC4-2) to the FT-IR sample chamber were installed in March 2022.

Table 1a. Ryugu sample list (particles and aggregate samples).

REMARKS:

- Size: maximum Feret diameter of a particle
- Weight: latest weight of a sample

Sample name	Sample type	Size (mm)	Weight (mg)	Initial description	Distribution
A0001	particle	5.13	18.1	FTIR	
A0002	particle	4.092	19.3	MicrOmega, FTIR	Ph2-Kochi
A0003	particle	4.307	19.6	FTIR	
A0004	particle	4.042	14.8	FTIR	
A0005	particle	3.367	10.2	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0006	particle	2.894	6.3	FTIR	
A0007	particle	4.834	14.9	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0008	particle	3.858	10.2	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0009	particle	3.1	9.2	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0010	particle	3.323	11.9	FTIR	
A0011	particle	4.937	13.3	FTIR	
A0012	particle	2.908	8.0	FTIR	
A0013	particle	2.086	2.8	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0014	particle	3.924	8.8	FTIR	
A0015	particle	3.41	14.6	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0016	particle	4.911	14.1	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0017	particle	3.748	8.4	MicrOmega, FTIR	
A0018	particle	3.926	12.6	FTIR	
A0019	particle	3.534	6.9	FTIR	
A0020	particle	3.787	6.5	FTIR	
A0021	particle	4.826	25.8	MicrOmega, FTIR, Multiband Image, Stereo Image	

A0022	particle	2.812	6.3	MicrOmega, FTIR	Phase2-Misasa
A0023	particle	3.396	6.7	FTIR	
A0024	particle	3.214	10.3	FTIR	
A0025	particle	3.068	7.8	FTIR	
A0026	particle	2.997	3.9	MicrOmega, FTIR	Initial Analysis
A0027	particle	4.741	10.2	FTIR	
A0028	particle	2.715	8.2	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0029	particle	3.069	7.3	MicrOmega, FTIR	Ph2-Kochi
A0030	particle	2.842	6.9	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0031	particle	3.105	3.9	FTIR	
A0032	particle	2.271	3.3	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0033	particle	2.406	4.0	MicrOmega, FTIR	Ph2-Misasa
A0034	particle	2.159	2.1	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0035	particle	2.102	2.7	MicrOmega, FTIR	Ph2-Misasa
A0036	particle	2.851	3.3	FTIR	
A0037	particle	3.129	6.0	MicrOmega, FTIR	Ph2-Kochi
A0038	particle	2.399	3.1	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0039	particle	2.461	3.9	FTIR	
A0040	particle	2.598	3.0	MicrOmega, FTIR	Initial Analysis
A0041	particle	2.739	3.5	FTIR	
A0042	particle	3.784	11.9	MicrOmega, FTIR	
A0043	particle	3.558	4.9	FTIR	
A0044	particle	2.663	4.2	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0045	particle	2.806	2.9	FTIR	
A0046	particle	3.781	17.9	FTIR	
A0047	particle	2.569	6.8	FTIR	
A0048	particle	3.734	3.0	MicrOmega, FTIR	Ph2-Misasa
A0049	particle	3.173	4.0	FTIR	

A0050	particle	2.623	3.5	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0051	particle	3.17	3.5	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0052	particle	2.452	3.0	FTIR	
A0053	particle	3.099	5.0	FTIR	
A0054	particle	2.582	3.1	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0055	particle	2.537	5.9	MicrOmega, FTIR	Initial Analysis
A0056	particle	2.105	3.1	FTIR	
A0057	particle	2.306	4.1	FTIR	
A0058	particle	3.085	3.3	MicrOmega, FTIR	Initial Analysis
A0059	particle	3.466	7.7	FTIR	
A0060	particle	3.461	5.4	FTIR	
A0061	particle	3.066	4.5	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0062	particle	3.203	8.6	FTIR	
A0063	particle	2.765	3.8	MicrOmega, FTIR	Initial Analysis
A0064	particle	2.952	6.7	MicrOmega, FTIR	Initial Analysis
A0065	particle	2.45	2.3		
A0066	particle	2.97	4.3	MicrOmega, FTIR, Multiband Image, Stereo Image	
A0067	particle	3.108	3.6	MicrOmega, FTIR	Initial Analysis
A0068	particle	3.053	6.0	FTIR	
A0069	particle	2.654	3.2	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0070	particle	2.281	2.0	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0071	particle	2.123	0.8		
A0072	particle	1.842	0.7		
A0073	particle	1.48	0.8	MicrOmega	Ph2-Misasa
A0074	particle	1.627	0.9		
A0075	particle	1.16	0.7		
A0076	particle	1.314	0.6		
A0077	particle	1.845	0.4		

A0078	particle	2.623	1.8	MicrOmega, FTIR	Ph2-Misasa
A0079	particle	1.36	0.8	MicrOmega, Multiband Image, Stereo Image	AO1
A0080	particle	1.574	1.4	MicrOmega	Initial Analysis
A0081	particle	1.425	0.6		
A0082	particle	1.59	0.6		
A0083	particle	1.724	1.2	MicrOmega, Multiband Image, Stereo Image	
A0084	particle	2.382	1.0	MicrOmega, Multiband Image	
A0085	particle	1.225	0.7	MicrOmega	Ph2-Misasa
A0086	particle	1.617	0.9	MicrOmega	Initial Analysis
A0087	particle	1.666	0.8		
A0088	particle	1.712	1.7	MicrOmega, FTIR, Multiband Image	
A0089	particle	1.603	1.0	MicrOmega	Initial Analysis
A0090	particle	2.008	1.3		
A0091	particle	2.588	3.5	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0092	particle	2.409	2.6	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0093	particle	1.999	1.6	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0094	particle	2.417	1.8	MicrOmega	Initial Analysis
A0095	particle	2.501	2.6	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0096	particle	2.959	7.6	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
A0097	particle	2.258	4.6	FTIR	
A0098	particle	1.868	1.9	MicrOmega, FTIR	Ph2-Kochi
A0099	particle	2.211	1.8	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
A0100	particle	2.551	2.1	FTIR	
A0101	particle	3.068	4.5	FTIR	
A0102	particle	2.782	4.6	FTIR	
A0103	particle	2.653	4.2	FTIR	

A0104 (Aa-MPF)	aggregate		0.3	MicrOmega	Initial Analysis
A0105 (Aa-VOL)	aggregate		4.0	MicrOmega, FTIR	Initial Analysis
A0106 (Aa-MPC)	aggregate		38.4	FTIR	Initial Analysis
A0107 (Aa-Chem)	aggregate		31.0	FTIR	Initial Analysis
A0108 (Aa-IOM)	aggregate		3.5	FTIR	Initial Analysis
A0109	particle	2.24	4.0	FTIR	
A0110	particle	3.268	7.9	FTIR	
A0111	particle	3.686	8.5	FTIR	
A0112	particle	3.046	5.1	MicrOmega, FTIR, Multiband Image	
A0113	particle	3.775	6.8	FTIR	
A0114	particle	2.39	5.2	MicrOmega, FTIR, Multiband Image	AO1
A0115	particle	2.978	7.2	FTIR	
A0116	particle	2.204	2.9	FTIR	Outreach
A0117	particle	3.02	4.2	MicrOmega, FTIR, Multiband Image	
A0118	particle	2.588	4.3	FTIR	
A0119	particle	2.657	4.9	MicrOmega, FTIR, Multiband Image	
A0120	particle	2.376	4.2	FTIR	
A0121	particle	2.723	3.3	FTIR	
A0122	particle	2.498	3.2	FTIR	
A0123	particle	2.808	4.7	MicrOmega, FTIR, Multiband Image	
A0124	particle	2.25	4.0	MicrOmega, FTIR, Multiband Image	AO1
A0125	particle	2.588	4.1	FTIR	
A0126	particle	1.876	2.4	FTIR	
A0127	particle	2.584	3.4	FTIR	
A0128	particle	2.355	1.5	FTIR	
A0129	particle	1.32	1.0		
A0130	particle	1.77	1.4	MicrOmega, Multiband Image	AO1
A0131	particle	2.451	3.8	FTIR	
A0132	particle	2.412	2.7	FTIR	

A0133	particle	2.607	4.1	FTIR	
A0134	particle	2.379	1.2	FTIR	
A0135	particle	2.803	3.1	FTIR	
A0136	particle	2.637	4.8	MicrOmega, FTIR, Multiband Image	
A0137	particle	2.375	2.7	FTIR	
A0138	particle	2.269	2.4	FTIR	
A0139	particle	3.227	2.1	MicrOmega, FTIR, Multiband Image	
A0140	particle	2.507	2.2	MicrOmega, FTIR, Multiband Image	AO1
A0141	particle	2.577	3.9	MicrOmega, FTIR, Multiband Image	AO1
A0142	particle	2.729	1.6	MicrOmega, FTIR, Multiband Image	
A0143	particle	4.328	8.2	FTIR	
A0144	particle	2.153	4.4	FTIR	
A0145	particle	2.461	3.3	MicrOmega, FTIR, Multiband Image	AO1
A0146	particle	2.614	3.3	FTIR	
A0147	particle	2.355	3.1	MicrOmega, FTIR, Multiband Image	AO1
A0148	particle	2.047	3.1	FTIR	
A0149	particle	2.039	1.8	FTIR	
A0150	particle	2.047	2.2	FTIR	
A0151	particle	2.768	3.9	FTIR	
A0152	particle	2.03	2.1	MicrOmega, FTIR, Multiband Image	
A0153	particle	2.256	4.1	FTIR	
A0154	particle	2.183	3.2	MicrOmega, FTIR, Multiband Image	AO1
A0155	particle	2.193	1.6	FTIR	
A0156	particle	2.466	3.7	FTIR	
A0157	particle	1.959	2.4		
A0158	particle	1.947	2.9	FTIR	

A0159	particle	2.844	3.4	MicrOmega, FTIR, Multiband Image	
A0160	particle	1.832	2.1		
A0161	particle	2.271	2.5	FTIR	Outreach
A0162	particle	2.405	3.8	FTIR	
A0163	particle	2.281	1.9	MicrOmega, FTIR, Multiband Image	
A0164	particle	2.34	2.6	FTIR	
A0165	particle	2.16	1.8	FTIR	
A0166	particle	2.553	2.7	FTIR	
A0167	particle	2.381	2.8	MicrOmega, FTIR, Multiband Image	AO1
A0168	particle	2.012	2.8	MicrOmega, FTIR, Multiband Image	
A0169	particle	1.835	2.4	MicrOmega, FTIR, Multiband Image	AO1
A0170	particle	2.094	1.3		
A0171	particle	1.964	2.3	FTIR	
A0172	particle	1.842	2.1		
A0173	particle	1.963	2.3	FTIR	
A0174	particle	2.35	3.1	FTIR	
A0175	particle	2.334	1.5	MicrOmega, Multiband Image	
A0176	particle	2.447	1.8	FTIR	
A0177	particle	1.517	1.1	MicrOmega, Multiband Image	
A0178	particle	1.561	0.7		
A0179	particle	1.465	1.3		
A0180	particle	1.592	0.8	MicrOmega, Multiband Image	AO1
A0181	particle	1.958	1.5	MicrOmega, Multiband Image	
A0182	particle	1.944	1.4	Multiband Image	Ph2-Kochi
A0183	particle	1.455	1.0	Multiband Image	Ph2-Kochi
A0184	particle	1.313	1.0	MicrOmega, Multiband Image	
A0185	particle	1.947	0.9		
A0186	particle	1.394	0.9	MicrOmega, Multiband Image	
A0187	particle	1.792	0.7		
A0188	particle	1.404	0.4	MicrOmega, Multiband Image	

A0189	particle	1.345	0.4		
A0190	particle	1.366	0.4		
A0191	particle	1.638	0.5		
A0192	particle	1.807	0.3		
A0193	particle	1.33	0.4		
A0194	particle	1.558	0.5	MicrOmega, Multiband Image	
A0195	particle	1.77	0.2		
A0196	particle	2.507	3.2	FTIR	
A0197	particle	2.024	1.7		
A0198	particle	2.164	2.9	MicrOmega, FTIR, Multiband Image	AO1
A0199	particle	1.971	2.2	MicrOmega, FTIR, Multiband Image	
A0200	particle	2.401	2.2	FTIR	
A0201	particle	2.11	1.5	FTIR	
A0202	particle	2.852	2.5	FTIR	
A0203	particle	1.896	1.8	MicrOmega, FTIR, Multiband Image	
A0204	particle	2.419	2.5	MicrOmega, FTIR, Multiband Image	AO1
A0205	particle	1.966	2.1	FTIR	
A0206	particle	2.063	3.1	FTIR	
A0207	particle	2.015	2.7	MicrOmega, FTIR, Multiband Image	AO1
A0208	particle	3.504	10.9	MicrOmega, FTIR, Multiband Image	AO1
A0209	particle	3.665	15.6	FTIR	
A0210	particle	2.092	1.3	MicrOmega, Multiband Image	
A0211	particle	2.289	2.8	FTIR	
A0212	particle	1.826	1.0		
A0213	particle	1.998	2.3		
A0214	particle	2.06	1.5		
A0215	particle	2.075	1.3		
A0216	aggregate		54.2	FTIR	NASA
A0217	aggregate		133.1	FTIR	NASA

A0218	aggregate		13.1	FTIR, Multiband Image	Ph2-Kochi
A0219	aggregate		12.6	FTIR, Multiband Image	Ph2-Kochi
A0220	aggregate		11.3	FTIR	
A0221	aggregate		13.9	FTIR	
A0222	aggregate		11.7	FTIR	
A0223	aggregate		8.4	FTIR	
A0224	aggregate		10.8	FTIR	
A0225	aggregate		11.7	FTIR	
A0226	particle	2.288	1.9	FTIR	
A0227	particle	2.093	2.7		
A0228	particle	2.374	2.5		
A0229	particle	2.672	2.4	FTIR	
A0230	particle	1.71	1.8		
A0231	particle	2.405	2.2		
A0232	particle	2.327	1.9	FTIR	
A0233	particle	2.462	1.2		
A0234	particle	2.066	2.5		
A0235	particle	2.603	2.1	FTIR	
A0236	particle	2.029	2.7		
A0237	particle	2.01	2.5		
A0238	particle	2.502	1.9	FTIR	
A0239	particle	2.029	1.7		
A0240	particle	2.092	2.4		
A0241	particle	2.136	2.6	FTIR	
A0242	particle	2.062	0.8		
A0243	particle	2.043	2.1		
A0244	particle	1.979	1.1		
A0245	particle	2.074	1.5		
A0246	particle	1.858	1.4		
A0247	particle	2.019	2.3	FTIR	
A0248	particle	1.789	1.4		
A0249	particle	1.91	2.1		
A0250	particle	2.803	2.4	FTIR	
A0251	particle	2.228	2.3		
A0252	particle	2.176	2.2		

A0253	particle	1.553	1.9		
A0254	particle	1.866	2.2		
A0255	particle	1.754	1.7		
A0256	particle	1.902	2.5	FTIR	
A0257	particle	2.024	1.6		
A0258	particle	1.868	2.0		
A0259	particle	2.168	1.6	FTIR	
A0260	particle	1.738	1.1		
A0261	particle	1.944	2.0		
A0262	particle	1.901	2.0	FTIR	
A0263	particle	2.17	1.9		
A0264	particle	1.787	1.9		
A0265	particle	1.802	1.4		
A0266	particle	1.896	1.5		
A0267	particle	2.444	1.9		
A0268	particle	1.892	2.1	FTIR	
A0269	particle	1.948	2.2		
A0270	particle	2.137	1.5		
A0271	particle	1.785	2.0	FTIR	
A0272	particle	1.819	1.5		
A0273	particle	1.843	1.7		
A0274	particle	2.067	1.4		
A0275	particle	2.035	2.0		
A0276	particle	3.061	4.4		
A0277	particle	1.824	2.0	FTIR	
A0278	particle	1.919	1.7		
A0279	particle	2.174	2.3		
A0280	particle	2.463	1.8	FTIR	
A0281	particle	2.185	1.7		
A0282	particle	2.858	4.1		
A0283	particle	2.261	2.5	FTIR	
A0284	particle	2.265	2.4		
A0285	particle	1.631	1.4		
A0286	particle	1.932	2.4	FTIR	
A0287	particle	1.97	1.7		

A0288	particle	1.94	1.4		
A0289	particle	1.832	1.9		
A0290	particle	2.13	1.3		
A0291	particle	2.185	2.5		
A0292	particle	1.728	1.5		
A0293	particle	2.155	2.6		
A0294	particle	1.898	0.9		
A0295	particle	1.808	1.4		
A0296	particle	1.729	1.2		
A0297	particle	2.15	1.1		
A0298	particle	1.537	1.3		
A0299	particle	1.566	1.2		
A0300	particle	1.298	0.6		
A0301	particle	2.069	1.8	FTIR	
A0302	particle	1.79	1.4		
A0303	particle	1.926	1.4		
A0304	particle	1.702	1.6		
A0305	particle	1.72	1.1		
A0306	particle	1.714	1.6		
A0307	particle	2.125	2.1	FTIR	
A0308	particle	1.903	2.1		
A0309	particle	1.692	0.9		
A0310	particle	1.745	1.4		
A0311	particle	1.818	1.9		
A0312	particle	1.831	1.3		
A0313	particle	2.395	1.9	FTIR	
A0314	particle	1.657	1.1		
A0315	particle	1.626	1.3		
A0316	particle	1.639	1.0		
A0317	particle	1.974	1.4		
A0318	particle	2.226	1.3		
A0319	particle	1.694	1.5		
A0320	particle	2.197	0.8		
A0321	particle	1.938	1.3		
A0322	particle	1.581	1.8		

A0323	particle	1.826	1.4		
A0324	particle	1.737	0.7		
A0325	particle	1.628	0.9		
A0326	particle	1.782	1.3		
A0327	particle	1.812	1.3		
A0328	particle	1.706	1.3		
A0329	particle	1.535	1.1		
A0330	particle	1.716	1.6		
A0331	particle	1.64	1.3		
A0332	particle	1.545	1.2		
A0333	particle	2.219	1.6		
A0334	particle	2.199	1.1		
A0335	particle	2.074	1.4		
A0336	particle	2.127	1.7		
A0337	particle	1.462	1.6		
A0338	particle	2.153	1.7		
A0339	particle	1.813	1.2		
A0340	particle	1.677	0.7		
A0341	particle	1.416	1.1		
A0342	particle	1.782	1.2		
A0343	particle	1.825	1.8		
A0344	particle	1.855	1.7		
A0345	particle	1.708	1.1		
A0346	particle	1.73	1.3		
A0347	particle	1.878	1.5		
A0348	particle	1.739	1.6		
A0349	particle	1.664	1.1		
A0350	particle	1.727	1.4		
A0351	particle	1.714	1.4		
A0352	particle	1.975	1.9		
A0353	particle	1.685	1.2		
A0354	particle	1.722	1.6		
A0355	particle	1.584	0.9		
A9000 (in vacuum)	aggregate				

A9001 (A1)	aggregate		24.8	FTIR	
A9002 (A2)	aggregate		20.5	FTIR	
A9003 (A3)	aggregate		428.4	FTIR	
A9004 (>1mm)	aggregate				
A9005 (A1D1)	aggregate		301.8		
A9006 (A1D2)	aggregate		224.5		
A9007 (A2D)	aggregate		273.3		
A9008 (A2D-Tf)	aggregate				
A9009 (A1D-Sp1)	aggregate		11.4	FTIR	
A9010 (A1D-Sp10)	aggregate		104.8	FTIR	
A9011 (AD)	aggregate				
B9001 (B1)	aggregate		13.0		
C0001	particle	7.359	100.0	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0002	particle	8.648	93.5	MicrOmega, FTIR	Initial Analysis
C0003	particle	4.889	33.2	FTIR	
C0004	particle	5.692	36.0	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0005	particle	5.333	20.8	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0006	particle	4.523	16.3	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0007	particle	4.168	13.4	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0008	particle	3.71	10.0	MicrOmega, FTIR	Ph2-Misasa
C0009	particle	3.52	11.1	MicrOmega, FTIR	Ph2-Kochi
C0010	particle	3.509	6.3	FTIR	
C0011	particle	3.538	9.3	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0012	particle	3.487	13.6	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
C0013	particle	3.196	6.7	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0014	particle	3.527	6.8	MicrOmega, FTIR	Ph2-Kochi

C0015	particle	2.185	1.8	MicrOmega, Multiband Image, Stereo Image	AO1
C0016	particle	2.198	2.0	MicrOmega, Multiband Image	
C0017	particle	2.753	5.1	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0018	particle	3.438	6.3	FTIR	
C0019	particle	2.647	6.8	MicrOmega, FTIR	Ph2-Misasa
C0020	particle	2.226	3.1	MicrOmega, Multiband Image, Stereo Image	
C0021	particle	2.803	6.7	FTIR	
C0022	particle	1.688	1.0	MicrOmega, Multiband Image, Stereo Image	
C0023	particle	2.996	5.0	MicrOmega, FTIR	Initial Analysis
C0024	particle	2.407	2.2	FTIR	
C0025	particle	3.002	5.6	MicrOmega, FTIR	Initial Analysis
C0026	particle	2.54	1.4		
C0027	particle	2.22	2.2	MicrOmega	Ph2-Misasa
C0028	particle	2.365	1.4		
C0029	particle	2.479	4.0	FTIR	
C0030	particle	1.847	0.7	MicrOmega, Multiband Image, Stereo Image	
C0031	particle	2.253	1.8	FTIR	
C0032	particle	3.212	3.1	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
C0033	particle	2.742	2.4	MicrOmega, FTIR	Initial Analysis
C0034	particle	2.095	2.4	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
C0035	particle	2.739	1.5		
C0036	particle	1.917	1.8		
C0037	particle	2.177	2.3	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0038	particle	1.781	0.8	MicrOmega, Multiband Image, Stereo Image	NASA
C0039	particle	1.778	1.0	MicrOmega	Ph2-Misasa
C0040	particle	3.425	4.9	MicrOmega, FTIR	Initial Analysis

C0041	particle	2.615	3.3	MicrOmega, FTIR	
C0042	particle	1.651	1.0	MicrOmega, Multiband Image, Stereo Image	NASA
C0043	particle	2.431	1.7	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0044	particle	3.69	4.7	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0045	particle	3.139	3.2	FTIR	
C0046	particle	2.155	2.6	MicrOmega, FTIR	Initial Analysis
C0047	particle	1.864	1.3	MicrOmega	Ph2-Misasa
C0048	particle	1.741	1.7	MicrOmega, Multiband Image, Stereo Image	NASA
C0049	particle	3.998	12.6	FTIR	
C0050	particle	2.409	2.2	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0051	particle	2.462	1.7	FTIR	
C0052	particle	1.911	2.1	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0053	particle	2.376	3.2	MicrOmega, FTIR	Ph2-Misasa
C0054	particle	2.877	2.9	FTIR	
C0055	particle	2.075	0.8	MicrOmega	Initial Analysis
C0056	particle	1.878	1.5	MicrOmega, Multiband Image, Stereo Image	NASA
C0057	particle	1.798	0.9	MicrOmega	Initial Analysis
C0058	particle	1.657	0.9	MicrOmega, Multiband Image, Stereo Image	
C0059	particle	1.755	0.8	MicrOmega, Multiband Image, Stereo Image	
C0060	particle	1.812	1.6	FTIR	
C0061	particle	1.807	1.3	MicrOmega	Initial Analysis
C0062	particle	1.641	1.1		
C0063	particle	2.58	3.6	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0064	particle	1.767	1.2		
C0065	particle	1.664	0.5		

C0066	particle	1.831	1.0		
C0067	particle	1.28	0.7	MicrOmega, Multiband Image, Stereo Image	
C0068	particle	1.98	1.7	MicrOmega, FTIR	Ph2-Kochi
C0069	particle	1.636	0.9	MicrOmega, Multiband Image, Stereo Image	
C0070	particle	1.288	0.7	MicrOmega, Multiband Image, Stereo Image	
C0071	particle	1.54	1.0	MicrOmega, Multiband Image, Stereo Image	
C0072	particle	1.702	1.1		
C0073	particle	1.981	0.9		
C0074	particle	3.441	6.6	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0075	particle	2.758	4.1	FTIR	
C0076	particle	2.727	4.7	MicrOmega, FTIR	Initial Analysis
C0077	particle	2.595	3.6	FTIR	
C0078	particle	2.562	3.6	MicrOmega, FTIR, Multiband Image, Stereo Image	
C0079	particle	3.028	2.5	MicrOmega, FTIR	Ph2-Misasa
C0080	particle	3.025	3.9	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
C0081	particle	3.235	4.4	MicrOmega, FTIR	Ph2-Misasa
C0082	particle	2.75	3.8	MicrOmega, FTIR	Ph2-Misasa
C0083	particle	3.32	3.0	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1
C0084	particle	2.383	2.5	FTIR	
C0085	particle	1.982	1.2	MicrOmega, Multiband Image, Stereo Image	AO1
C0086	particle	2.316	2.6	FTIR	
C0087	particle	2.163	2.0	MicrOmega	Ph2-Kochi
C0089	particle	2.45	2.5	FTIR	
C0090	particle	2.645	2.6	FTIR	
C0091	particle	2.361	3.8	MicrOmega, FTIR, Multiband Image, Stereo Image	AO1

C0092	particle	2.371	1.9	FTIR	
C0093	particle	2.634	3.9	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0094	particle	2.181	3.1	MicrOmega, FTIR	
C0095	particle	2.4	2.1	FTIR	
C0096	particle	1.859	2.0	MicrOmega, FTIR, Multiband Image, Stereo Image	NASA
C0097	particle	2.118	2.5	FTIR	
C0098	particle	2.078	0.8	MicrOmega, Multiband Image, Stereo Image	NASA
C0099	particle	2.73	3.9	FTIR	
C0100	particle	2.435	3.8	FTIR	
C0101	particle	2.095	2.7		
C0102	particle	2.995	2.3	FTIR	
C0103	particle	1.975	1.5	MicrOmega	
C0104	particle	0.898	0.2		
C0105 (Ca-MPF)	aggregate		0.4	MicrOmega	Initial Analysis
C0106 (Ca-VOL)	aggregate		4.0	FTIR	Initial Analysis
C0107 (Ca-MPC)	aggregate		38.8	FTIR	Initial Analysis
C0108 (Ca-Chem)	aggregate		33.0	FTIR	Initial Analysis
C0109 (Ca-IOM)	aggregate		3.7	FTIR	Initial Analysis
C0113	particle	2.335	2.6	FTIR	
C0114	particle	2.483	2.7	FTIR	
C0115	particle	2.601	2.9	FTIR	
C0116	particle	2.496	3.3	FTIR	
C0117	particle	2.769	2.9	FTIR	
C0118	particle	2.481	2.7	FTIR	
C0119	particle	2.72	4.6	MicrOmega, FTIR, Multiband Image	
C0120	particle	2.185	2.7	MicrOmega, FTIR, Multiband Image	
C0121	particle	2.604	1.8	FTIR	
C0122	particle	2.114	2.2	FTIR	
C0123	particle	2.158	3.4	FTIR	
C0124	particle	2.086	2.5	FTIR	Outreach

C0125	particle	2.003	1.6	MicrOmega, FTIR, Multiband Image	
C0126	particle	2.685	1.8	FTIR	
C0127	particle	1.71	1.2		
C0128	particle	2.243	2.6	MicrOmega, FTIR, Multiband Image	
C0129	particle	2.138	2.8	FTIR	
C0130	particle	2.128	1.3	MicrOmega, Multiband Image	
C0131	particle	2.114	2.4	FTIR	
C0132	particle	2.246	1.8		
C0133	particle	2.302	1.8		
C0134	particle	2.079	1.2		
C0135	particle	1.96	1.6		
C0136	particle	1.621	1.4		
C0137	particle	1.955	2.3	MicrOmega, Multiband Image	AO1
C0138	particle	1.988	1.5		
C0139	particle	2.332	2.0	MicrOmega, FTIR, Multiband Image	
C0140	particle	2.333	1.9	FTIR	
C0141	particle	2.198	1.1		
C0142	particle	1.73	1.6		
C0143	particle	2.766	1.5		
C0144	particle	2.071	1.4	Multiband Image	
C0145	particle	1.506	0.9		
C0146	particle	2.067	1.4	MicrOmega, Multiband Image	
C0147	particle	1.87	1.6	FTIR	
C0148	particle	1.716	0.8		
C0149	particle	1.976	2.0	FTIR	Outreach
C0150	particle	2.161	1.0		
C0151	particle	2.079	1.1		
C0152	particle	2.188	1.0		
C0153	particle	1.788	1.4		
C0154	particle	2.152	1.1		
C0155	particle	1.838	1.5		
C0156	particle	1.488	1.2		

C0157	particle	1.964	1.6	MicrOmega, FTIR, Multiband Image	
C0158	particle	1.768	1.8	FTIR	
C0159	particle	2.007	1.5	FTIR	
C0160	particle	1.968	2.1		
C0161	particle	1.834	1.1	MicrOmega, Multiband Image	AO1
C0162	particle	1.966	1.8	MicrOmega, Multiband Image	AO1
C0165	particle	1.912	0.4		
C0166	particle	2.022	0.6		
C0167	particle	1.778	1.4		
C0168	particle	1.893	1.0		
C0169	particle	1.562	0.9		
C0170	particle	2.027	0.9	MicrOmega, Multiband Image	
C0171	particle	1.621	0.7		
C0172	particle	1.608	0.7		
C0173	particle	1.926	0.2		
C0174	particle	2.005	1.1		
C0175	particle	1.58	1.1		
C0176	particle	1.718	1.1		
C0177	particle	1.768	0.9		
C0178	particle	1.939	1.5	MicrOmega, Multiband Image	
C0179	particle	1.754	1.2	MicrOmega, Multiband Image	AO1
C0180	particle	1.472	1.0	Multiband Image	
C0181	particle	1.141	0.5		
C0182	particle	1.898	1.3	MicrOmega, Multiband Image	AO1
C0183	particle	1.697	0.6		
C0184	particle	1.621	1.0		
C0185	particle	1.574	1.4		
C0186	particle	1.609	1.1		
C0187	particle	1.611	1.0		
C0188	particle	1.652	1.0		
C0189	particle	1.689	1.1		
C0190	particle	1.819	1.0		
C0191	particle	1.547	1.3		
C0192	particle	2.079	1.1	MicrOmega, Multiband Image	

C0193	particle	1.568	1.5		
C0194	particle	1.592	1.5		
C0195	particle	1.85	0.9	Multiband Image	Ph2-Kochi
C0196	particle	1.217	0.2		
C0197	particle	1.182	0.1		
C0198	particle	1.293	0.7	Multiband Image	Ph2-Kochi
C0199	particle	1.148	0.3		
C0200	particle	2.732	5.3	MicrOmega, FTIR, Multiband Image	AO1
C0201	particle	1.496	0.3		
C0202	particle	1.754	1.3		
C0203	particle	1.49	0.6		
C0204	particle	1.059	0.1		
C0205	aggregate		77.0	FTIR	NASA
C0206	aggregate		26.8	FTIR	NASA
C0207	aggregate		2.6	FTIR, Multiband Image	Ph2-Kochi
C0208	aggregate		8.2	FTIR, Multiband Image	Ph2-Kochi
C0209	aggregate		5.3	FTIR, Multiband Image	Ph2-Kochi
C0210	aggregate		10.1	FTIR	
C0211	aggregate		13.7	FTIR	
C0212	aggregate		11.0	FTIR	
C0213	aggregate		12.5	FTIR	
C0216	particle	1.626	1.3		
C0217	particle	1.742	1.2		
C0218	particle	1.502	0.6		
C0219	particle	1.91	1.3		
C0220	particle	1.693	0.9		
C0221	particle	1.326	0.8		
C0222	particle	1.355	0.8		
C0223	particle	2.453	2.0		
C0224	particle	1.936	1.1		
C0225	particle	1.893	1.1		
C0226	particle	1.587	1.0		
C0227	particle	1.707	1.0		
C0228	particle	1.477	0.5		

C0229	particle	1.988	1.5		
C0230	particle	1.563	0.8		
C0231	particle	1.572	0.8		
C0232	particle	1.295	0.6		
C0233	particle	1.61	0.9		
C0234	particle	1.671	0.8		
C0235	particle	1.535	0.7		
C0236	particle	1.922	0.6		
C0237	particle	1.637	0.9		
C0238	particle	1.573	0.5		
C0239	particle	1.616	0.5		
C0240	particle	1.673	0.7		
C0241	particle	1.948	0.6		
C0242	particle	1.712	0.7		
C0243	particle	1.538	0.3		
C0244	particle	1.664	0.5		
C0245	particle	1.98	0.8		
C0246	particle	1.692	0.6		
C0247	particle	1.48	0.6		
C0248	particle	1.364	0.9		
C0249	particle	1.567	0.6		
C0250	particle	2.015	1.0		
C0251	particle	1.577	0.8		
C0252	particle	1.528	0.6		
C0253	particle	1.823	0.7		
C0254	particle	1.335	0.8		
C0255	particle	1.366	0.8		
C0256	particle	1.528	1.0		
C0257	particle	1.629	0.7		
C0258	particle	1.574	0.9		
C0259	particle	1.545	1.0		
C0260	particle	1.538	1.0		
C0261	particle	1.721	1.0		
C0262	particle	1.436	0.6		
C0263	particle	1.864	0.8		

C0264	particle	1.849	1.0		
C0265	particle	1.577	0.5		
C0266	particle	1.668	0.5		
C0267	particle	1.374	0.5		
C0268	particle	1.514	0.6		
C0269	particle	1.901	0.8		
C0270	particle	1.723	0.6		
C0271	particle	1.99	0.5		
C0272	particle	1.568	0.9		
C0273	particle	1.365	0.6		
C0274	particle	1.656	0.5		
C0275	particle	1.634	0.5		
C0276	particle	1.685	1.0		
C0277	particle	1.583	1.0		
C0278	particle	1.24	0.4		
C0279	particle	1.256	0.6		
C0280	particle	1.16	0.3		
C0281	particle	1.505	1.0		
C0282	particle	1.776	0.6		
C0283	particle	1.276	0.7		
C0284	particle	1.556	0.5		
C0285	particle	1.463	0.8		
C9000 (CXL)	particle	10.345	138.1	FTIR	
C9001 (C1)	aggregate		278.8	FTIR	
C9002 (C2)	aggregate		6.4	FTIR	
C9003 (C3)	aggregate		285.0	FTIR	
C9004 (>1mm)	aggregate				
C9005 (C2D)	aggregate		94.0		
C9006 (CD)	aggregate				

Table 1b. Ryugu sample list (gas samples).

REMARKS:

Volume: volume of gas cylinder

Sample name	Volume (mL)	Distribution	description
NT1	760		
NT1P1A	45		Haya2 gas collected @room temp.
NT1P1B	45		Haya2 gas collected @room temp.
NT1P2E	45	Initial Analysis	Haya2 gas collected @room temp.
NT1P2F	45	Initial Analysis	Haya2 gas collected @room temp.
NT1P3A	45	Initial Analysis	Haya2 gas collected @room temp.
NT1P3B	45	Initial Analysis	Haya2 gas collected @room temp.
NT1P4C	45	Initial Analysis	Haya2 gas collected @room temp.
NT1P4Q1	45	Initial Analysis	Haya2 gas collected @room temp.
NT2	760		
NT3	760		
NT4	760		
NT5 (blank-gas)	760		blank-gas
NT5P1C	45		Blank gas collected @room temp.
NT5P1D	45		Blank gas collected @room temp.
NT5P2G	45	Initial Analysis	Blank gas collected @room temp.
NT5P2H	45	Initial Analysis	Blank gas collected @room temp.
NT5P3D	45	Initial Analysis	Blank gas collected @room temp.
NT5P3Q2	45	Initial Analysis	Blank gas collected @room temp.
NT6	760		

Table 1c Ryugu sample list (others: artificial materials).

Sample name	Size (mm)	Weight (mg)
C0088	0.985	0.1
C0110	7.583	4
C0111	2.82	9.7
C0112	1.697	0.3
C0163	3.533	1.1
C0164	1.302	0.2
C0214		0
C0215	0.558	0

Table 1d. Ryugu sample list (previously allocated samples).

Sample name	Distribution	Description
A0026-01	IA-Stone	SEM, EPMA
A0026-02	IA-Stone	SEM, EPMA
A0026-FIB001	IA-Stone	FIB, TEM
A0026-FO001	IA-Stone	XRD
A0026-FO003	IA-Stone	XRD
A0026-Part_B	IA-Stone	SEM
A0026-Part_BFO001	IA-Stone	
A0026-pFIB01	IA-Stone	pFIB
A0026-pFIB02	IA-Stone	pFIB, Raman, FTIR, SEM
A0026-pFIB02_TEM001	IA-Stone	pFIB, TEM
A0026-pFIB02_TEM002	IA-Stone	pFIB, TEM
A0026-powder_1	IA-Stone	
A0040-C1001	IA-Chem	Indium-pressed
A0040-C1002	IA-Chem	Indium-pressed
A0040-C2001	IA-Chem	FIB-section
A0040-C3000	IA-Chem	Heated 1000 dgreeC
A0040-C4000	IA-Chem	residue
A0040-FC002	IA-Stone	
A0040-FC003_NaMg_phosphate	IA-Stone	
A0040-FO001	IA-Stone	
A0055-01	IA-Stone	SEM, EPMA, SIMS
A0055-02	IA-Stone	SEM, EPMA, SIMS
A0055-03	IA-Stone	SEM, EPMA, SIMS
A0055-FC001	IA-Stone	XRD
A0055-FC003	IA-Stone	XRD
A0058-C1001	IA-Chem	polished section
A0058-C1002	IA-Chem	polished section
A0058-C2000	IA-Chem	residue (picked up from the ethanol)
A0058-C2001_01	IA-Sand	
A0058-C2001_02	IA-Sand	
A0058-C2001_03	IA-Sand	
A0058-C2001_04	IA-Sand	
A0058-C2001_05	IA-Sand	

A0058-C2001_07	IA-Sand	
A0058-C2001_08	IA-Sand	
A0058-C2001_13	IA-Sand	
A0058-FC003	IA-Stone	
A0058-FC004	IA-Stone	
A0063-01	IA-Stone	SEM, EPMA
A0063-FC001	IA-Stone	XRD, Mossbaur
A0063-FC002	IA-Stone	XRD
A0063-FC003	IA-Stone	
A0063-FC007	IA-Stone	FIB, XCT
A0063-FC010_FIB001	IA-Stone	FIB, TEM, CT
A0063-FC011_015_TEM001	IA-Stone	TEM(No magnetic)
A0063-FC011_015_TEM002	IA-Stone	TEM(No magnetic)
A0063-FC011_015_TEM003	IA-Stone	TEM(No magnetic)
A0063-FC011_015_TEM004	IA-Stone	TEM(No magnetic)
A0063-FC011_015_TEM005	IA-Stone	TEM(No magnetic)
A0063-FC016	IA-Stone	
A0063-FC017	IA-Stone	
A0063-FC018	IA-Stone	XRD
A0063-FC019	IA-Stone	XRD
A0063-FO001	IA-Stone	XRD
A0064-00	IA-Stone	
A0064-01	IA-Stone	Polished section,SEM, EPMA
A0064-02	IA-Stone	Polished section,SEM, EPMA, FTIR
A0064-CT001	IA-Stone	particle Al-needle,FIB, XCT, IR-CT
A0064-FC001	IA-Stone	
A0064-FC001_FIB001	IA-Stone	FIB,TEM
A0064-FC001_FIB003	IA-Stone	FIB,TEM
A0064-FC001_FIB004	IA-Stone	FIB,TEM
A0064-FC001_FIB005	IA-Stone	FIB,TEM
A0064-FC001_FIB006	IA-Stone	FIB,TEM
A0064-FC001_FIB007	IA-Stone	FIB,TEM
A0064-FC002	IA-Stone	XRD
A0064-FC003	IA-Sand	Grain with an original surface, Loaned from Stone team.
A0064-FC0031	IA-Sand	FIB section, Loaned from Stone team.

A0064-FC0032	IA-Sand	FIB section, Loaned from Stone team.
A0064-FC0033	IA-Sand	FIB section, Loaned from Stone team.
A0064-FC004	IA-Stone	
A0064-FIB001	IA-Stone	Thin-section on FIB grid, A0064-black ball, FIB, TEM, STXM
A0064-FO005	IA-Stone	Indium-pressed,SEM-EDS(No magnetic), FIB(No magnetic)
A0064-FO006	IA-Stone	Indium-pressed,SEM-EDS(No magnetic)
A0064-FO007	IA-Stone	Indium-press, No magnetic field SEM-EDS, No magnetic field FIB
A0064-FO007_FIB02	IA-Stone	Thin-section on FIB grid,TEM-EDS, EELS
A0064-FO007_FIB03	IA-Stone	Thin-section on FIB grid,TEM-EDS
A0064-FO007_FIB04	IA-Stone	Thin-section on FIB grid,TEM-EDS, EELS
A0064-FO007_FIB05	IA-Stone	Thin-section on FIB grid,TEM-EDS
A0064-FO007_FIB06	IA-Stone	Thin-section on FIB grid,TEM-EDS, EELS
A0064-FO007_FIB07	IA-Stone	Thin-section on FIB grid,TEM-EDS, EELS
A0064-FO008	IA-Stone	Indium-pressed, No magnetic field SEM-EDS
A0064-FO012	IA-Stone	Indium-pressed, Raman
A0064-FO013	IA-Stone	Polished section, SEM, Resin
A0064-FO013_17_02	IA-Stone	Polished section, SEM, Resin
A0064-FO014	IA-Stone	Polished section, SEM
A0064-FO015	IA-Stone	Polished section, SEM
A0064-FO016	IA-Stone	Polished section, SEM
A0064-FO017	IA-Stone	Polished section, SEM
A0064-FO018	IA-Stone	SiO2 powder pressed,heated 600 dgreeC
A0064-FO019_FIB001	IA-Stone	Au-pressed,FIB
A0064-FO019_FIB002	IA-Stone	FIB
A0064-FO020	IA-Stone	Polished section
A0064-FO023	IA-Stone	particle Al-needle,FIB, XCT, IR-CT
A0064-FO024	IA-Stone	particle Al-needle,FIB, XCT, IR-CT
A0064-FO025	IA-Stone	glass fiber
A0064-FO025	IA-Stone	Glass fiber-embedding
A0064-FO026	IA-Stone	
A0064-FO027	IA-Stone	
A0064-FO028	IA-Stone	particles in a slide glass , not analysised
A0064-FO029	IA-Stone	particles in a slide glass , not analysised

A0064-powder01	IA-Stone	Particle ,AFM
A0064-powder02	IA-Stone	
A0067-00	IA-Stone	
A0067-00	IA-Stone	
A0067-01	IA-Stone	Polished section,SEM, EPMA
A0067-02	IA-Stone	Polished section,SEM, EPMA
A0067-CT001	IA-Stone	Thick-section on FIB grid,FIB, CT
A0067-CT002	IA-Stone	Particle Ti-needle,FIB, CT
A0067-CT003	IA-Stone	Particle Ti-needle,FIB, CT
A0067-FC001	IA-Stone	Particle carbon fiber, XRD
A0067-FC002	IA-Stone	Particle carbon fiber, XRD, FIB
A0067-FC004	IA-Stone	Particle carbon fiber, XRD, XCT
A0067-FC005	IA-Stone	Particle carbon fiber, XRD, XCT
A0067-FC006	IA-Stone	Particle carbon fiber, XRD
A0067-FC007	IA-Stone	Particle carbon fiber, XRD, XCT
A0067-FC008	IA-Stone	Indium, SEM, XRD
A0067-FC010	IA-Stone	
A0067-FIB001	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0067-FIB002	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0067-FIB003	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0067-FIB004	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0067-FIB005	IA-Stone	Thin-section on FIB grid,FIB, TEM, XCT
A0067-FIB006	IA-Stone	Thin-section on FIB grid,FIB, TEM, XCT
A0067-FIB007	IA-Stone	Thin-section on FIB grid,FIB, TEM, XCT
A0067-FIB008	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0067-FIB009	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0067-FIB010	IA-Stone	Thin-section on FIB grid,FIB, TEM, STXM
A0067-FIB011	IA-Stone	Thin-section on FIB grid,FIB, TEM, STXM
A0067-FO002_FIB001	IA-Stone	Thin-section on FIB grid,FIB
A0067-pyrrhotite	IA-Sand	
A0067-SW_FIB001	IA-Stone	Thin-section on FIB grid,FIB, TEM-EDS, EELS
A0080-S001	IA-SOM	Particles remaining on a sample dish, stored in a glass vial
A0094-01	IA-Stone	Polished section,
A0094-02	IA-Stone	Polished section,
A0094-C1001	IA-Chem	Indium-pressed

A0094-FC001	IA-Stone	Mossbauer
A0094-FC002	IA-Stone	
A0094-FC003	IA-Stone	
A0094-FC004	IA-Stone	
A0094-FIB001	IA-Stone	Thin-section on FIB grid,FIB, TEM, CT
A0094-FIB002	IA-Stone	Thin-section on FIB grid,FIB, TEM, CT
A0094-FIB003	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0094-FIB004	IA-Stone	Thin-section on FIB grid,FIB, TEM
A0104-00		Container and the remaining grains
A0104-00_2004_01	IA-Sand	FIB section, Allocatd to Kobe U. TEM.
A0104-000_001_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_002_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_003_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_004_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_005_01	IA-Sand	FIB section, TEM
A0104-000_006_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_007_01	IA-Sand	FIB section, TEM
A0104-000_008_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_009_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_010_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_011_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_012_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_013_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_014_00	IA-Sand	FIB section, TEM
A0104-000_014_01	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_015_00	IA-Sand	FIB section, TEM
A0104-000_015_01	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_016_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_017_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_018_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_019_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_020_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-000_021_00	IA-Sand	FIB section, Bended after TEM.
A0104-001_000_00	IA-Sand	FIB section, TEM. Magnetite shows superstructure reflections.
A0104-001_003_01	IA-Sand	FIB section, TEM. Composed mainly of phyllosilicates.

A0104-001_004_01	IA-Sand	FIB section, TEM. pyrrhotite?
A0104-001_004_02	IA-Sand	FIB section, TEM. Unique polycrystalline magnetite.
A0104-001_005_01	IA-Sand	Sample stub, Too much epoxy. FIB-SEM.
A0104-001_005_02	IA-Sand	FIB section, TEM. It has a thin crust?
A0104-002_000_00	IA-Sand	
A0104-002_001_02	IA-Sand	FIB section, TEM
A0104-002_001_03	IA-Sand	FIB section, Allocated to US Naval Laboratory. TEM.
A0104-002_001_04	IA-Sand	FIB section, TEM.
A0104-002_001_05	IA-Sand	FIB section, TEM.
A0104-002_001_06	IA-Sand	FIB section, Allocated to U Hawaii. TEM.
A0104-002_001_07	IA-Sand	FIB section, TEM. Magnetite show superlattice reflections.
A0104-002_002_01	IA-Sand	FIB section, Allocated to U Jena. TEM.
A0104-002_002_02	IA-Sand	
A0104-002_003_01	IA-Sand	FIB section, Allocated to Hiroshima U. TEM.
A0104-002_005_01	IA-Sand	FIB section, TEM.
A0104-002_005_02	IA-Sand	
A0104-002_006_01	IA-Sand	FIB section, Allocated to Kochi Core. TEM.
A0104-002_006_02	IA-Sand	FIB section, Allocated to US Naval Laboratory. TEM.
A0104-002_007_01	IA-Sand	
A0104-002_007_02	IA-Sand	Sample stub, Lage grain. Loaned from Stone team.
A0104-002_008_01	IA-Sand	Sample stub, Small grains. Loanded from Stone team. Contaminations unknown origins. FE-SEM shows that it is a mixture of opx and barite.
A0104-003_000_00	IA-Sand	Sample stub, Allocated to Kobe U. SEM-EDS.
A0104-004_000_00	IA-Sand	FIB section, Allocatd to Kobe U. TEM.
A0104-005_000_00	IA-Sand	FIB section, Na-Mg-P-O-bearing phase. TEM.
A0104-005_009_01	IA-Sand	Sample stub, FE-SEM
A0104-005_009_02	IA-Sand	FIB section, TEM.
A0104-006_000_00	IA-Sand	FIB section, Allocated to U Lille. It is on the same grid P006_g03T2,3. Large Po with a flat surface. TEM.
A0104-006_001_01	IA-Sand	TEM observation without exposure to the atmosphere. Space weathered.
A0104-006_002_01	IA-Sand	FIB section, Allocated to U Lille. It is on the same grid P006_g03T2,3. Large Po with a flat surface with voids. TEM.

A0104-006_003_01	IA-Sand	FIB section, Allocated to U Lille. It is on the same grid P006_g03T2,3. Large Po with a flat surface. TEM.
A0104-006_003_02	IA-Sand	Sample stub, FE-SEM at Hiroshima U. Renumbered as P007 (original P006).
A0104-006_003_03	IA-Sand	FIB section, Fe-Cr-S-bearing phase. Allocated to Hiroshima U. TEM.
A0104-007_000_00	IA-Sand	FIB section, FeS. Allocated to U Jena. TEM. Without epoxy.
A0104-007_005_01	IA-Sand	FIB section, FeS. Allocated to U Hawaii. TEM. Without epoxy.
A0104-007_006_01	IA-Sand	FIB section, Fe-Ni-P-bearing phase. TEM.
A0104-007_006_02	IA-Sand	Sample stub, Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM.
A0104-007_008_01	IA-Sand	FIB section, Sp-bearing. TEM.
A0104-008_000_00	IA-Sand	FIB section, Sp-bearing. TEM.
A0104-008_012_01	IA-Sand	
A0104-008_012_02	IA-Sand	FIB section, Ol-bearing. TEM.
A0104-008_012_03	IA-Sand	FIB section, Ol-bearing. TEM.
A0104-008_012_04	IA-Sand	FIB section, Sp-bearing. TEM.
A0104-008_012_05	IA-Sand	Sample stub,
A0104-008_012_06	IA-Sand	FIB section, Px was dropped after TEM.
A0104-008_014_01	IA-Sand	FIB section, Allocated to US Naval Laboratory. TEM.
A0104-009_000_00	IA-Sand	FIB section, Ol-bearing. TEM.
A0104-009_005_01	IA-Sand	FIB section, 2 Ol-bearing. TEM. Allocated to NASA
A0104-009_008_01	IA-Sand	Sample stub, Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM. In addition, it was osberved at Kyoto U with FE-SEM.
A0104-009_008_02	IA-Sand	Sample stub, Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM. In addition, it was osberved at Kyoto U with FE-SEM.
A0104-010_000_00	IA-Sand	FIB section, TEM
A0104-010_009_01	IA-Sand	TEM observation without exposure to the atmosphere. Space weathered.
A0104-011_000_00	IA-Sand	Sample stub, Allocatd to Kobe U. TEM.
A0104-011_002_01	IA-Sand	FIB section, TEM

A0104-012_000_00	IA-Sand	FIB section, Allocated to U Lille. TEM. STXM-XANES but Carbon contaminated although we prepared it without using epoxy.
A0104-013_001_01	IA-Sand	FIB section, Allocated to U Gre Alpes. STXM-XANES but Carbon contaminated although we prepared it without using epoxy. TEM. Rerturned from U Lille.
A0104-013_001_02	IA-Sand	FIB section, Containing a rounded object. TEM
A0104-013_001_03	IA-Sand	FIB section, STXM
A0104-013_002_01	IA-Sand	FIB section, Large FeS. TEM
A0104-013_002_02	IA-Sand	Sample stub, Pressed into Indium. Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM.
A0104-013_002_03	IA-Sand	
A0104-015_000_00	IA-Sand	FIB section, TEM. Without epoxy.
A0104-015_004_01	IA-Sand	TEM observation without exposure to the atmosphere. Space weathered.
A0104-017_001_01	IA-Sand	
A0104-017_002_01	IA-Sand	FIB section, TEM. Without epoxy.
A0104-017_004_01	IA-Sand	FIB section, TEM. Without epoxy.
A0104-017_005_01	IA-Sand	FIB section, TEM. Without epoxy.
A0104-017_006_01	IA-Sand	FIB section, Allocated to U Gre Alpes. STXM-XANES but Carbon contaminated although we prepared it without using epoxy. TEM. Rerturned from U Lille.
A0104-017_006_02	IA-Sand	
A0104-017_006_03	IA-Sand	FIB section, TEM. Without epoxy.
A0104-017_006_04	IA-Sand	FIB section, TEM. Without epoxy.
A0104-017_006_05	IA-Sand	Sample stub, Pressed into Indium. Allocated to U Lille. Not used.
A0104-017_006_06	IA-Sand	Sample stub, Pressed into Indium. Not used.
A0104-018_000_00	IA-Sand	Sample stub, Pressed into Indium. Not used.
A0104-019_000_00	IA-Sand	Sample stub, SEM
A0104-020_000_00	IA-Sand	FIB section, TEM
A0104-021_000_00	IA-Sand	FIB section, TEM
A0104-021_002_01	IA-Sand	FIB section, TEM, same grid
A0104-021_002_02	IA-Sand	FIB section, TEM, same grid

A0104-021_002_03	IA-Sand	FIB section, TEM, same grid
A0104-021_002_04	IA-Sand	FIB section, TEM
A0104-021_002_05	IA-Sand	FIB section, Spae weathered FeS+whisker,TEM
A0104-021_002_06	IA-Sand	FIB section, TEM
A0104-021_002_07	IA-Sand	FIB section, TEM
A0104-021_004_01	IA-Sand	FIB section, TEM
A0104-021_004_02	IA-Sand	FIB section, TEM
A0104-021_005_01	IA-Sand	
A0104-021_005_02	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
A0104-021_012_01	IA-Sand	Sample stub, Too much epoxy. FIB-SEM.
A0104-022_000_00	IA-Sand	Sample stub, Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM. In addition, it was osberved at Kyoto U with FE-SEM.
A0104-022_037_01	IA-Sand	TEM observation without exposure to the atmosphere. Space weathered.
A0104-022_037_02	IA-Sand	FIB section analyzed by TEM. Too thick
A0104-022_037_03	IA-Sand	Allocated to US Naval Laboratory. TEM.
A0104-023_000_00	IA-Sand	Sample stub, Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM. In addition, it was osberved at Kyoto U with FE-SEM.
A0104-023_069_01	IA-Sand	TEM observation without exposure to the atmosphere. Space weathered.
A0104-024_000_00	IA-Sand	Sample stub, SEM
A0104-024_027_01	IA-Sand	FIB section, TEM
A0104-024_031_01	IA-Sand	FIB section, TEM
A0104-024_031_02	IA-Sand	FIB section, TEM
A0104-024_031_03	IA-Sand	FIB section, TEM
A0104-024_031_04	IA-Sand	FIB section, TEM
A0104-024_031_05	IA-Sand	FIB section, TEM
A0104-024_031_06	IA-Sand	FIB section, TEM
A0104-025_000_00	IA-Sand	Sample stub, SEM
A0104-026_000_00	IA-Sand	Sample stub, FIB-SEM at U Hawaii.
A0104-026_006_01	IA-Sand	
A0104-026_087_03	IA-Sand	FIB section, FIB-SEM at U Hawaii. Carbonate. TEM
A0104-027_000_00	IA-Sand	Sample stub, FE-SEM

A0104-027_006_01	IA-Sand	FIB section, Space weathering, FeS
A0104-027_006_02	IA-Sand	FIB section, Space weathering, FeS
A0104-027_006_03	IA-Sand	FIB section, Space weathering, Carbonate
A0104-027_006_04	IA-Sand	FIB section, Space weathering, Carbonate
A0104-028_000_00	IA-Sand	Sample stub, FE-SEM
A0104-028_021_01	IA-Sand	FIB section,
A0104-028_022_01	IA-Sand	FIB section, Silicate melt +laered internal structure 11.29 processed
A0104-028_022_02	IA-Sand	FIB section, Silicate melt +laered internal structure
A0104-028_078_01	IA-Sand	FIB section, Silicate melt
A0104-028_078_02	IA-Sand	FIB section, Silicate melt
A0104-028_098_01	IA-Sand	FIB section, Space weathered silicate+magnetite
A0104-028_098_02	IA-Sand	FIB section, Space weathered silicate+magnetite
A0104-029_000_00	IA-Sand	
A0104-029_025_00	IA-Sand	Extracted grain, Allocated to U Hawaii. Ultramicrotomed. A potted butt was returned.
A0104-029_025_01	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_02	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_03	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_04	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_05	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_06	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_07	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_08	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM.
A0104-029_025_09	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. This grids in another grid case. The sample was moved from the above case (B1). TEM.

A0104-029_025_10	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM. Section #10 to 14 are stored in the same box that stores #1 to #9.
A0104-029_025_11	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM. Section #10 to 14 are stored in the same box that stores #1 to #9.
A0104-029_025_12	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM. Section #10 to 14 are stored in the same box that stores #1 to #9.
A0104-029_025_13	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM. Section #10 to 14 are stored in the same box that stores #1 to #9.
A0104-029_025_14	IA-Sand	Ultrathinsections on microgrids, Perepared at U Hawaii. 8 grids in a grid case. TEM. Section #10 to 14 are stored in the same box that stores #1 to #9.
A0104-GL01_000_00	IA-Sand	Sample stub, FIB-SEM. FIB section and APT samples were prepared at U Glasgow.
A0104-GL02_000_00	IA-Sand	Sample stub, FIB-SEM. FIB section and APT samples were prepared at U Glasgow.
A0104-GLA_000_01	IA-Sand	
A0104-GLA_000_02	IA-Sand	
A0104-GLA_000_03	IA-Sand	
A0104-GLA_000_04	IA-Sand	
A0105-03_Pellet3	IA-VOL	
A0105-09	IA-VOL	Pellet on Cu disk, heated up to 70 degC under vacuum
A0105-12_Pellet12	IA-VOL	We broke the capillary (pellet 12) and measured the gas before the end of the allowed analysis period. We then loaded the sample into our laser port for step heating analysis. It is stored in an evacuated laser port in a N2 filled cabinet.
A0105-13_Pellet13	IA-VOL	The other remains sealed inside the capillary tube in which it was irradiated. It is stored in our radiation cupboard and so we are not able to provide an image easily (we have to restrict the exposure of workers to that environment).The box filled with N2 containing the first three samples listed above is in a secure area
A0105-16	IA-VOL	Pellet on Cu disk, heated up to 70 degC under vacuum

A0105-17	IA-VOL	Particle (0.067mg), heated up to 70 degC under vacuum
A0105-18	IA-VOL	Particle (0.067mg), heated up to 70 degC under vacuum
A0105-19_LET713_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph
A0105-19_LET713_B	IA-VOL	Solution before Be fraction from cation chromatograph
A0105-19_LET713_C	IA-VOL	Mn fraction from anion chromatograph
A0105-19_LET713_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
A0105-20_LET714_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph
A0105-20_LET714_B	IA-VOL	Solution before Be fraction from cation chromatograph
A0105-20_LET714_C	IA-VOL	Mn fraction from anion chromatograph
A0105-20_LET714_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
A0105-21	IA-VOL	Particle (0.098mg), heated up to 250 degC under vacuum
A0105-22	IA-VOL	Particle (0.063mg), heated up to 250 degC under vacuum
A0105-23	IA-VOL	powder (fragments), stored in glovebox
A0106-001a	IA-Stone	Polished section,SEM, EPMA
A0106-001b	IA-Stone	Polished section,SEM, EPMA
A0106-001c	IA-Stone	Polished section,SEM, EPMA
A0106-001c_FIB1	IA-Stone	FIB,TEM
A0106-001c_FIB2	IA-Stone	
A0106-001c_FIB3	IA-Stone	
A0106-001c_FIB4	IA-Stone	
A0106-001c_FIB5	IA-Stone	
A0106-001d	IA-Stone	Polished section,SEM EBSD, EPMA
A0106-001e	IA-Stone	Thin section on metal plate,SEM, EPMA
A0106-10_intact	IA-IOM	UM or FIB
A0106-10_IOM_residue	IA-IOM	
A0106-11_intact	IA-IOM	FTIR, Raman
A0106-12_intact	IA-IOM	Visible
A0106-14_intact	IA-IOM	13 and 14 in the same glass, AFMIR
A0106-14_IOM_residue	IA-IOM	Epoxy stub
A0106-15_IOM_residue	IA-IOM	TEM grid; box IOM slot A1
A0106-16_intact	IA-IOM	FTIR, Raman
A0106-16_IOM_residue	IA-IOM	TEM grid; box IOM slot A2
A0106-17_IOM_residue	IA-IOM	TEM grid; box IOM slot A3

A0106-19_IOM_residue	IA-IOM	TEM grid; box IOM slot A5
A0106-2_IOM_residue	IA-IOM	
A0106-20_IOM_residue	IA-IOM	FTIR
A0106-21_intact	IA-IOM	Intact particles
A0106-22_IOM_residue	IA-IOM	FTIR
A0106-23_intact	IA-IOM	23, 24, and 25 in the same slide glass, FTIR, Raman
A0106-24_intact	IA-IOM	23, 24, and 25 in the same slide glass, FTIR, Raman, nanoSIMS
A0106-25_intact	IA-IOM	23, 24, and 25 in the same slide glass, FTIR, Raman
A0106-25_IOM_residue	IA-IOM	Powder on Si wafer, CO-AFM
A0106-26_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), FTIR
A0106-27_intact	IA-IOM	Intact particles, Cu disk
A0106-27_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
A0106-28_intact	IA-IOM	FTIR
A0106-28_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
A0106-29_intact	IA-IOM	FTIR
A0106-29_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
A0106-3_intact	IA-IOM	Visible
A0106-3_IOM_residue	IA-IOM	
A0106-30_intact	IA-IOM	FTIR
A0106-30_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
A0106-31_intact	IA-IOM	FTIR
A0106-31_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
A0106-32_intact	IA-IOM	FTIR
A0106-32_IOM_residue	IA-IOM	pressed on to Cu, TOFSIMS
A0106-33_intact	IA-IOM	FTIR
A0106-33_IOM_residue	IA-IOM	FTIR, Raman
A0106-34_intact	IA-IOM	Intact particles, Cu disk
A0106-34_IOM_residue	IA-IOM	On nanoSIMS base, NanoSIMS
A0106-35_intact	IA-IOM	on slide glass, HF/HCl

A0106-35_IOM_residue	IA-IOM	FIB on STXM holder7 (Pos#2)
A0106-36_intact	IA-IOM	on slide glass, HF/HCl
A0106-36_IOM_residue	IA-IOM	FIB on STXM holder7 (Pos#3)
A0106-37_intact	IA-IOM	on slide glass
A0106-38_intact	IA-IOM	on slide glass
A0106-39_intact	IA-IOM	on slide glass
A0106-4_intact	IA-IOM	FTIR, Raman, nanoSIMS
A0106-4_IOM_residue	IA-IOM	
A0106-40_intact	IA-IOM	on slide glass
A0106-41_intact	IA-IOM	on slide glass
A0106-42_intact	IA-IOM	on slide glass
A0106-5_intact	IA-IOM	
A0106-5_IOM_residue	IA-IOM	IOM residue, isolates by HF/HCl treatment
A0106-6_intact	IA-IOM	FTIR, Raman, nanoSIMS
A0106-6_IOM_residue	IA-IOM	
A0106-7_intact	IA-IOM	Visible
A0106-7_IOM_residue	IA-IOM	
A0106-8_intact	IA-IOM	UM or FIB
A0106-8_IOM_residue	IA-IOM	
A0106-9_intact	IA-IOM	FTIR, Raman
A0106-9_IOM_residue	IA-IOM	IOM risidue on glass slide,
A0106-C1001	IA-Chem	Fraction Pb, Solvent H2O
A0106-C1002	IA-Chem	Fraction Ti, Solvent 9M HCl-0.05M HF
A0106-C1003	IA-Chem	Fraction Fe, Solvent 4M HNO3
A0106-C1004	IA-Chem	Fraction Ca, Solvent 10M HNO3
A0106-C1005	IA-Chem	Fraction Cr, Solvent 5M HCl
A0106-C1006	IA-Chem	Fraction K-Mg-Ni, Solvent 1M HNO3
A0106-S001	IA-SOM	
A0106-S002	IA-SOM	Particles remaining in a glass vial
A0106-S003	IA-SOM	Dried on silicon plate after extraction by hexane
A0106-S004	IA-SOM	Dried on silicon plate after extraction by DCM
A0106-S005	IA-SOM	Dried on silicon plate after extraction by MeOH
A0106-S006	IA-SOM	Dried on silicon plate after extraction by water
A0107-C1001	IA-Chem	Fraction Pb, Solvent H2O
A0107-C1002	IA-Chem	Fraction Ti, Solvent 9M HCl-0.05M HF

A0107-C1003	IA-Chem	Fraction Fe, Solvent 4M HNO3
A0107-C1004	IA-Chem	Fraction Ca, Solvent 10M HNO3
A0107-C1005	IA-Chem	Fraction Cr, Solvent 5M HCl
A0107-C1006	IA-Chem	Fraction K-Mg-Ni, Solvent 1M HNO3
A0108-10_intact	IA-IOM	FTIR, Rama, nanoSIMS
A0108-11	IA-IOM	Fragment on SEM stub,
A0108-13_intact	IA-IOM	NanoSIMS
A0108-14	IA-IOM	Fragments of original A0108-14 grain on glass slide,
A0108-15_intact	IA-IOM	crushed, AFM-IR
A0108-16_intact	IA-IOM	Au-embedding, FIB (UTokyo), STXM (PF) etc
A0108-17_intact	IA-IOM	FTIR, Raman
A0108-18_intact	IA-IOM	FTIR, Rama, nanoSIMS
A0108-19_intact	IA-IOM	crushed, AFM-IR
A0108-23	IA-IOM	Epoxy stub
A0108-24	IA-IOM	Epoxy stub
A0108-27	IA-IOM	TEM grid; box A0108 slot A1
A0108-30	IA-IOM	Epoxy stub
A0108-32	IA-IOM	TEM grid; box A0108 slot E1
A0108-35	IA-IOM	Fragment of original A0108-11 garin on glass silde
A0108-36	IA-IOM	Epoxy stub
A0108-38	IA-IOM	TEM grid; box A0108 slot J1
A0108-4_intact	IA-IOM	STXM
A0108-40	IA-IOM	TEM grid; box A0108 slot J3
A0108-41	IA-IOM	TEM grid; box A0108 slot J4
A0108-42	IA-IOM	Epoxy stub
A0108-46	IA-IOM	TEM grid; box A0108 slot N2
A0108-48_intact	IA-IOM	crushed, FTIR
A0108-49_intact	IA-IOM	crushed, FTIR, Raman
A0108-5_intact	IA-IOM	FTIR, Raman
A0108-50_intact	IA-IOM	crushed, FTIR
A0108-51_intact	IA-IOM	crushed, FTIR, Raman
A0108-52_intact	IA-IOM	crushed, FTIR
A0108-53_intact	IA-IOM	particle, FTIR, Raman
A0108-54_intact	IA-IOM	particle, FTIR, Raman
A0108-55_intact	IA-IOM	particle, FTIR, Raman

A0108-57	IA-IOM	FIB liftout; box A0108 slot R1
A0108-6_intact	IA-IOM	FTIR, Rama, nanoSIMS
A0108-60_intact	IA-IOM	particle, FTIR, Raman
A0108-61_intact	IA-IOM	particle, FTIR, Raman
A0108-62_intact	IA-IOM	particle, FTIR
A0108-63_intact	IA-IOM	particle, FTIR
A0108-65	IA-IOM	FIB liftout in own box
A0108-67_intact	IA-IOM	HCl-residue in vial (phyllosilicates and IOM), H-NMR
A0108-68_intact	IA-IOM	HCl-residue in vial (phyllosilicates and IOM), Reflectance
A0108-69_intact	IA-IOM	On nanoSIMS base, NanoSIMS
A0108-7_intact	IA-IOM	FTIR, Raman
A0108-70_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-16
A0108-71_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-16
A0108-72_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-16
A0108-73_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-16
A0108-74_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-16
A0108-75_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-12
A0108-76_intact	IA-IOM	Au plate in petri dish for FIB, separated from A0108-12
A0108-77_intact	IA-IOM	particle, FTIR
A0108-78_intact	IA-IOM	particle, FTIR
A0108-79_intact	IA-IOM	on slide glass, HF/HCl
A0108-8	IA-IOM	Fragments of original A0108-8 grain on glass slide
A0108-80_intact	IA-IOM	on slide glass, HF/HCl
A0108-81_intact	IA-IOM	on slide glass
A0108-82_intact	IA-IOM	on slide glass
A0108-83_intact	IA-IOM	on slide glass
A0108-84_intact	IA-IOM	on slide glass
A0108-85_intact	IA-IOM	on slide glass
A0108-86_intact	IA-IOM	on slide glass
A0108-87_intact	IA-IOM	FIB on STXM holder1 (Pos#5)
A0108-88_intact	IA-IOM	FIB on STXM holder2 (Pos#4)
A0108-9	IA-IOM	Fragment on glass slide
A0108-91_intact	IA-IOM	FIB on STXM holder11 (Pos#5)
C0002-00_01	IA-Stone	
C0002-00_02	IA-Stone	

C0002-10_IOM_residue	IA-IOM	FTIR
C0002-11_IOM_residue	IA-IOM	FTIR
C0002-12_IOM_residue	IA-IOM	FTIR
C0002-13_IOM_residue	IA-IOM	Reflectance
C0002-14_IOM_residue	IA-IOM	Au-embedding, PF-STXM
C0002-15_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
C0002-16_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), on diamond, FTIR
C0002-2_IOM_residue	IA-IOM	NanoSIMS
C0002-3_IOM_residue	IA-IOM	NanoSIMS
C0002-4_IOM_residue	IA-IOM	NanoSIMS
C0002-40	IA-Stone	Indium glassfiber
C0002-5_IOM_residue	IA-IOM	NanoSIMS
C0002-6_IOM_residue	IA-IOM	FTIR
C0002-7_IOM_residue	IA-IOM	FTIR
C0002-8_IOM_residue	IA-IOM	FTIR
C0002-9_IOM_residue	IA-IOM	FTIR
C0002-C1001	IA-Chem	polished section
C0002-C2001	IA-Chem	Indium-pressed
C0002-C2002	IA-Chem	Indium-pressed
C0002-C3001	IA-Chem	FIB-section
C0002-C3002	IA-Chem	FIB-section
C0002-C3003	IA-Chem	FIB-section
C0002-C3004	IA-Chem	FIB-section
C0002-C4000	IA-Chem	residue
C0002-C5001	IA-Chem	Fraction Fe+tr., Solvent 3M HNO3-0.2M HF
C0002-C5002	IA-Chem	Fraction Ca+tr., Solvent 10M HNO3
C0002-C5003	IA-Chem	Fraction Mg-Ni., Solvent 1M HNO3
C0002-FC001	IA-Stone	
C0002-FC002	IA-Stone	
C0002-FC003	IA-Stone	
C0002-FC004	IA-Stone	Particle carbon fiber, Mosbauer
C0002-FC005	IA-Stone	
C0002-FC009	IA-Stone	Thin-section on FIB grid, FIB, TEM, XCT

C0002-FC009_CT001	IA-Stone	particle Ti-needle, FIB, XCT
C0002-FC012	IA-Stone	TOF-SIMS, FIB, XCT, TOF-SIMS
C0002-FC013	IA-Stone	
C0002-FC014	IA-Stone	Indium-pressed, Raman
C0002-FC015	IA-Stone	Indium-pressed, Raman
C0002-FC016	IA-Stone	Polished section, Resin
C0002-FC016_05	IA-Stone	Polished section, Resin
C0002-FC016_06	IA-Stone	Polished section, Resin
C0002-FC017	IA-Stone	Polished section, Resin
C0002-FC019	IA-Stone	Indium-pressed, No magnetic field SEM-EDS, No magnetic field FIB
C0002-FC019_FIB01	IA-Stone	Thin-section on FIB grid, TEM-EDS
C0002-FC019_FIB02	IA-Stone	
C0002-FC019_FIB03	IA-Stone	
C0002-FC020	IA-Stone	
C0002-FC021	IA-Stone	Indium-pressed, No magnetic field SEM-EDS
C0002-FC021	IA-Stone	
C0002-FC029	IA-Stone	
C0002-FC030_heated200to500	IA-Stone	
C0002-FC031_heated400to500	IA-Stone	
C0002-FIB001	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-FIB002	IA-Stone	Thin-section on FIB grid, FIB, TEM, STXM
C0002-FO05	IA-Stone	
C0002-IOM_1	IA-Stone	In wrapping paper, FTIR
C0002-IOM_2	IA-Stone	In wrapping paper, FTIR
C0002-IOM_4	IA-Stone	In wrapping paper, FTIR
C0002-p3_4_powder01	IA-Stone	particle, In petridish, FTIR, Physical property measurement
C0002-p3_4_powder02	IA-Stone	particle, In petridish, FTIR, Physical property measurement
C0002-p3_4_powder10	IA-Stone	powder, bottole, FTIR
C0002-p3_4_powder3	IA-Stone	Particle on mnini In petridish, Physical property measurement
C0002-p3_4_powder4	IA-Stone	Particle on mnini In petridish, Physical property measurement
C0002-p3_4_powder5	IA-Stone	Particle on mnini In petridish, Physical property measurement
C0002-p3_4_powder6	IA-Stone	Particle on mnini In petridish, Physical property measurement
C0002-p3_4_powder7	IA-Stone	powder, bottole
C0002-p3_4_powder8	IA-Stone	pawder, bottole, FTIR

C0002-p3_4_powder9	IA-Stone	pawder, bottole, FTIR
C0002-P5	IA-Stone	Polished section, SEM, EPMA, FIB, SIMS
C0002-P5_FIB001	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P5_FIB002	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P5_FIB003	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P5_FIB004	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P5_FIB005	IA-Stone	
C0002-P5_FIB006	IA-Stone	
C0002-P5_FIB007	IA-Stone	
C0002-P5_FIB008	IA-Stone	
C0002-P5_FIB009	IA-Stone	
C0002-P6	IA-Stone	Polished section, SEM, EPMA, FIB
C0002-P6_CT001	IA-Stone	particle Ti-needle, FIB, XCT
C0002-P6_CT002	IA-Stone	particle Ti-needle, FIB, XCT
C0002-P6_CT003	IA-Stone	particle Ti-needle, FIB, XCT
C0002-P6_CT004	IA-Stone	particle Ti-needle, FIB, XCT
C0002-P6_CT005	IA-Stone	particle Ti-needle, FIB, XCT
C0002-P6_CT006	IA-Stone	particle Ti-needle, FIB, XCT
C0002-P6_FIB001	IA-Stone	Thin-section on FIB grid, XCT, FIB, TEM
C0002-P6_FIB002	IA-Stone	Thin-section on FIB grid, XCT, FIB, TEM
C0002-P6_FIB003	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P6_FIB004	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P6_FIB005	IA-Stone	Thin-section on FIB grid, FIB, TEM, XCT
C0002-P6_FIB006	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P6_FIB007	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0002-P6_FIB008	IA-Stone	Thin-section on FIB grid, FIB, TEM, XCT
C0002-P6_FIB009	IA-Stone	Thin-section on FIB grid, FIB, TEM, XCT
C0002-P6_FIB010	IA-Stone	
C0002-P6_magnesite	IA-Stone	Polished section, SEM, Raman
C0002-powder1	IA-Stone	
C0002-S001	IA-SOM	Particles enclosed in an alminum foil
C0002-SH4_chand5_tranche1	IA-Stone	FIB
C0002-SH4_chand5_tranche2	IA-Stone	FIB
C0002-V01_LET723_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph

C0002-V01_LET723_B	IA-VOL	Solution before Be fraction from cation chromatograph
C0002-V01_LET723_C	IA-VOL	Mn fraction from anion chromatograph
C0002-V01_LET723_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
C0002-V02_LET724_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph
C0002-V02_LET724_B	IA-VOL	Solution before Be fraction from cation chromatograph
C0002-V02_LET724_C	IA-VOL	Mn fraction from anion chromatograph
C0002-V02_LET724_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
C0023-00	IA-Stone	
C0023-01	IA-Stone	Polished section, EPMA, SEM, SIMS
C0023-03	IA-Stone	Polished section, EPMA, SEM, SIMS
C0023-FC001	IA-Stone	Particle carbon fiber, XRD, XCT
C0023-FC002	IA-Stone	Particle carbon fiber, Mossbauer
C0023-FC004	IA-Stone	
C0023-FC005	IA-Stone	
C0023-FC006	IA-Stone	
C0023-FC007	IA-Stone	
C0023-FC008	IA-Stone	
C0023-FC009	IA-Stone	Heated to 600 dgreeC, Embedded SiO2 powder
C0023-FC010	IA-Stone	
C0023-FC011	IA-Stone	
C0025-00	IA-Stone	
C0025-01		Polished section, SEM, EPMA
C0025-02	IA-Stone	Polished section, SEM, EPMA
C0025-02_FIB001	IA-Stone	FIB, C0025-02 carb "A"
C0025-02_FIB002	IA-Stone	FIB, C0025-02 carb "B"
C0025-02_FIB003	IA-Stone	FIB, C0025-02 SrO2 "C"
C0025-03	IA-Stone	Polished section, SEM, EPMA
C0025-FC001	IA-Stone	XRD, Particle carbon fiber, HY2-4 B4, Transferd 20220705 C0025 A-1
C0025-FC002	IA-Stone	XRD, Particle carbon fiber, HY2-4 B5, Transferd 20220705 C0025 A-2
C0025-FC003	IA-Stone	
C0033-00	IA-Stone	Mini petridish
C0033-01	IA-Stone	Polished section, SEM, EPMA

C0033-01_FIB001	IA-Stone	FIB, FIB
C0033-01_FIB002	IA-Stone	FIB
C0033-01_FIB003	IA-Stone	FIB
C0033-01_FIB004	IA-Stone	FIB
C0033-01_FIB005	IA-Stone	FIB
C0033-01_FIB006	IA-Stone	FIB
C0033-02	IA-Stone	Polished section, SEM, EPMA
C0033-03	IA-Stone	Polished section, SEM, EPMA
C0033-04	IA-Stone	Polished section, SEM, EPMA
C0033-04_FIB001	IA-Stone	FIB
C0033-04_FIB002	IA-Stone	FIB
C0033-04_FIB003	IA-Stone	FIB
C0033-04_FIB004	IA-Stone	FIB
C0033-04_FIB005	IA-Stone	FIB, TEM
C0033-FC003	IA-Stone	Indium-pressed, Raman
C0033-FC004	IA-Stone	Particle carbon fiber, XRD
C0033-FC005	IA-Stone	
C0033-FO001	IA-Stone	
C0033-FO002	IA-Stone	
C0040-00	IA-Stone	Mini petridish
C0040-01	IA-Stone	Polished section, SEM, EPMA
C0040-02	IA-Stone	Polished section, SEM, EPMA, SIMS
C0040-02_FIB001	IA-Stone	
C0040-02_FIB002	IA-Stone	FIB, FIB, XRD
C0040-FC003	IA-Stone	
C0040-FC004	IA-Stone	Particle carbon fiber, XRD
C0040-FC005	IA-Stone	
C0040-FC006	IA-Stone	
C0040-FC025_04	IA-Stone	Polished section, SEM, Resin
C0040-FC025_PS01	IA-Stone	Polished section, SEM, Resin
C0040-FC025_SP02	IA-Stone	Polished section, SEM, Resin
C0040-FO001	IA-Stone	Particle, SEM, FIB, TEM
C0040-FO002	IA-Stone	
C0040-FO003	IA-Stone	
C0040-FO004	IA-Stone	

C0040-FO005	IA-Stone	
C0040-FO006	IA-Stone	
C0040-FO007	IA-Stone	
C0040-FO008	IA-Stone	
C0040-FO009	IA-Stone	
C0040-FO010	IA-Stone	
C0040-FO011	IA-Stone	
C0040-FO012	IA-Stone	
C0040-FO012	IA-Stone	
C0040-FO013	IA-Stone	
C0040-FO013	IA-Stone	
C0040-FO014	IA-Stone	
C0040-FO015	IA-Stone	
C0040-FO016	IA-Stone	
C0040-FO017	IA-Stone	
C0040-FO018	IA-Stone	
C0040-FO019	IA-Stone	
C0040-FO020	IA-Stone	
C0040-FO021	IA-Stone	
C0040-FO022	IA-Stone	
C0040-FO023	IA-Stone	
C0040-FO024	IA-Stone	
C0040-FO025	IA-Stone	Indium-pressed, No magnetic field SEM
C0040-FO026	IA-Stone	
C0040-FO027	IA-Stone	
C0040-FO028	IA-Stone	
C0040-FO029	IA-Stone	
C0040-FO030	IA-Stone	
C0040-FO031	IA-Stone	
C0040-FO032	IA-Stone	
C0040-FO041_043_TEM001	IA-Stone	Particles on Cu grid, non-magnetic field TEM
C0040-FO041_043_TEM002	IA-Stone	Particles on Cu grid, non-magnetic field TEM
C0040-FO041_043_TEM003	IA-Stone	Particles on Cu grid, non-magnetic field TEM
C0040-FO041_043_TEM004	IA-Stone	Particles on Cu grid, non-magnetic field TEM, heating
C0040-FO044	IA-Stone	

C0040-FO045	IA-Stone	
C0040-FO047	IA-Stone	
C0040-FO048a	IA-Stone	Particle carbon fiber, XRD
C0040-FO049	IA-Stone	
C0040-FO050	IA-Stone	
C0040-FO051	IA-Stone	
C0040-FO052	IA-Stone	
C0040-FO053	IA-Stone	
C0040-FO054	IA-Stone	
C0040-FO055	IA-Stone	
C0040-FO056	IA-Stone	
C0040-FO057	IA-Stone	
C0040-FO058	IA-Stone	
C0040-FO059	IA-Stone	
C0040-FO060	IA-Stone	
C0040-FO061	IA-Stone	
C0040-FO062	IA-Stone	
C0040-FO063	IA-Stone	
C0040-FO064	IA-Stone	
C0040-FO065_01		Particle, Magnetic field
C0040-FO065_02		Particle, Magnetic field
C0046-00_1	IA-Stone	Particle in mini petridish
C0046-00_2	IA-Stone	Particle in mini petridish
C0046-01	IA-Stone	Polished section, SEM, EPMA, FTIR, SIMS
C0046-02	IA-Stone	Polished section, SEM, EPMA
C0046-FC011	IA-Stone	
C0046-FC012	IA-Stone	Particle carbon fiber, XRD
C0046-FO001	IA-Stone	Indium-pressed (C0046-DR001), FIB
C0046-FO001_FIB001	IA-Stone	
C0046-FO002	IA-Stone	
C0046-FO003	IA-Stone	Indium-pressed, Raman
C0046-FO004_010	IA-Stone	Polished section,Resin
C0046-FO004_010_04	IA-Stone	Polished section,Resin
C0046-FO004_010_05	IA-Stone	Resin
C0046-FO004_010_06	IA-Stone	Resin

C0046-FO004b	IA-Stone	
C0046-FO005b	IA-Stone	
C0046-FO006	IA-Stone	Polished section,Resin
C0046-FO007	IA-Stone	Polished section,Resin
C0046-FO008	IA-Stone	Polished section,Resin
C0046-FO009	IA-Stone	Polished section,Resin
C0046-FO010	IA-Stone	Polished section,Resin
C0046-FO015	IA-Stone	Particle Al-needle, FIB, IR-CT, XCT
C0055-00_01	IA-Stone	Quartz dish
C0055-00_02	IA-Stone	
C0055-01	IA-Stone	Polished section, SEM, EPMA, FIB, Raman
C0055-01_FIB01	IA-Stone	FIB, TEM
C0055-02	IA-Stone	Polished section, SEM, EPMA
C0055-FO001	IA-Stone	Particle carbon fiber, XRD
C0057-1_intact	IA-IOM	residue (just a little)
C0057-10_intact	IA-IOM	Intact particles, Cu disk
C0057-11_intact	IA-IOM	HF-HCl, FTIR
C0057-12_intact	IA-IOM	HF-HCl, FTIR
C0057-13_intact	IA-IOM	on slide glass
C0057-14_intact	IA-IOM	on slide glass
C0057-15_intact	IA-IOM	FIB on STXM holder8 (Pos#2), 2022.1 at UVSOR
C0057-16_intact	IA-IOM	FIB on STXM holder11 (Pos#2)
C0057-2_intact	IA-IOM	residue (just a little)
C0057-3_intact	IA-IOM	FTIR
C0057-4_intact	IA-IOM	Intact particles
C0057-5_intact	IA-IOM	AFMIR
C0057-6_intact	IA-IOM	FTIR, Raman
C0057-7_intact	IA-IOM	FTIR
C0057-8_intact	IA-IOM	Intact particles, Cu disk
C0057-S001	IA-SOM	Particles remaining on a sample dish, stored in a glass vial
C0057-S002	IA-SOM	Particle on a metal disk, stored in FFTC
C0061-00_1	IA-Stone	
C0061-01	IA-Stone	Polished section, SEM, EPMA, Raman
C0061-02	IA-Stone	Polished section, SEM, EPMA
C0061-03	IA-Stone	Polished section, SEM, EPMA

C0061-FC001	IA-Stone	
C0061-FC002	IA-Stone	
C0061-FC003	IA-Stone	Polished section, Indium
C0061-FC006	IA-Stone	
C0061-FC007	IA-Stone	Particle
C0061-FC008	IA-Stone	Particle
C0061-FC009	IA-Stone	Particle
C0061-FIB001	IA-Stone	
C0061-FO001	IA-Stone	Particle, Mini petridish, Not analyzed
C0076-00_1	IA-Stone	Mini petridish
C0076-00_2	IA-Stone	quartz dish
C0076-01	IA-Stone	Polished section, SEM, EPMA
C0076-01_FIB001	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0076-01_FIB002	IA-Stone	Thin-section on FIB grid, FIB, TEM, STXM
C0076-01_FIB003	IA-Stone	Thin-section on FIB grid, C0076-01_ultrathin3, FIB, TEM, STXM
C0076-02	IA-Stone	Polished section, SEM, EPMA, SIMS
C0076-02_CT001	IA-Stone	Particle Ti-needle, FIB, XCT
C0076-02_CT002	IA-Stone	Particle Ti-needle, FIB, XCT
C0076-02_CT003	IA-Stone	Particle Ti-needle, FIB, XCT
C0076-02_FIB001	IA-Stone	Thin-section on FIB grid, FIB, TEM, XCT
C0076-02_FIB002	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0076-02_FIB003	IA-Stone	Thin-section on FIB grid, FIB, TEM
C0076-03	IA-Stone	Polished section, SEM, EPMA
C0076-04	IA-Stone	Polished section, SEM, EPMA
C0076-05	IA-Stone	Polished section, SEM, EPMA
C0076-06	IA-Stone	Polished section, SEM, EPMA
C0076-07	IA-Stone	Polished section, SEM, EPMA
C0076-08	IA-Stone	Polished section, SEM, EPMA
C0076-09	IA-Stone	Polished section, SEM, EPMA
C0076-10	IA-Stone	Polished section, SEM, EPMA, SIMS
C0076-11	IA-Stone	Polished section, SEM, EPMA
C0076-FC001	IA-Stone	
C0076-FC002	IA-Stone	
C0076-FC004	IA-Stone	

C0076-FC005	IA-Stone	
C0076-FO001_TEM01	IA-Stone	Microtome
C0076-FO001_TEM02	IA-Stone	Microtome
C0076-FO001a	IA-Stone	potted butt
C0076-FO002	IA-Stone	
C0076-FO002_TEM01	IA-Stone	Microtome
C0076-FO002_TEM02	IA-Stone	Microtome
C0076-FO002_TEM03	IA-Stone	Microtome
C0076-FO002_TEM04	IA-Stone	Microtome
C0076-FO002_TEM05	IA-Stone	Microtome
C0076-FO003	IA-Stone	Potted butt
C0076-FO003_FIB001	IA-Stone	FIB
C0076-FO003_FIB002	IA-Stone	FIB
C0076-FO003_TEM01	IA-Stone	Potted butt
C0076-FO003_TEM02	IA-Stone	Potted butt
C0076-FO004	IA-Stone	Potted butt
C0076-FO004_FIB001	IA-Stone	
C0076-FO004_FIB002	IA-Stone	
C0076-FO004_TEM01	IA-Stone	Microtome
C0076-FO004_TEM02	IA-Stone	Microtome
C0076-FO007	IA-Stone	600C, SiO2 embedded
C0076-FO008	IA-Stone	Heated to 600 dgreeC, Embedded SiO2
C0076-FO009	IA-Stone	Indium-pressed, Not analyzed
C0076-FO010	IA-Stone	
C0103-00_1	IA-Stone	
C0103-01	IA-Stone	Polished section, SEM, EPMA, EBSD
C0103-02	IA-Stone	Polished section, SEM, EPMA
C0103-FC001	IA-Stone	Particle carbon fiber, Mossbauer
C0103-FC005_FIB001	IA-Stone	Thin-section on FIB grid, FIB, TEM, XCT
C0103-FC006	IA-Stone	Indium-pressed, SEM
C0103-FC009_010_TEM001	IA-Stone	Particles on Cu grid, No magnetic fieldTEM
C0103-FC009_010_TEM002	IA-Stone	Particles on Cu grid, No magnetic fieldTEM
C0103-FO001	IA-Stone	
C0103-FO002	IA-Stone	
C0103-FO003	IA-Stone	

C0105-00		Container and the remaining grains
C0105-030_000_00	IA-Sand	Sample stub, Observed and prepared at Kyushu U without exposure to the atmosphere using FIB-SEM. In addition, it was osberved at Kyoto U with FE-SEM.
C0105-030_037_01	IA-Sand	FIB section, TEM. Too thick.
C0105-031_000_00	IA-Sand	Sample stub, Allocated to U Jena. FIB-SEM.
C0105-031_000_01	IA-Sand	FIB section, Prepared at U Jena. Due to unknown grain number used for FIB, 000 was applied to this grain. TEM.
C0105-032_000_00	IA-Sand	Sample stub, Allocated to U Gre Alpes. FIB-SEM.
C0105-033_000_00	IA-Sand	Sample stub, Allocated to U Hawaii. FIB-SEM.
C0105-034_000_00	IA-Sand	Sample stub, Allocated to U Lille. FIB-SEM.
C0105-034_014a_01	IA-Sand	FIB section, Prepared at U Lille. Numbers on cases is G3. TEM. Space weathered.
C0105-034_016b_01	IA-Sand	FIB section, Prepared at U Lille. TEM. STXM-XANES but carbon contaminated. One grain shows space weathering. Number on the case is G4.
C0105-034_016b_02	IA-Sand	FIB section, Prepared at U Lille. TEM. STXM-XANES but carbon contaminated. One grain shows space weathering. Number on the case is G6.
C0105-034_017_01	IA-Sand	FIB section, Prepared at U Lille. TEM. Space weathering. Number on the case is G5.
C0105-034_020_01	IA-Sand	FIB section, Prepared at U Lille. Numbers on cases is G5. G1, G2, G5 are in the same case. TEM. Not space weathered.
C0105-034_020_02	IA-Sand	FIB section, Prepared at U Lille. Numbers on cases is G5. G1, G2, G5 are in the same case. TEM. Not space weathered.
C0105-035_000_00	IA-Sand	
C0105-036_000_00	IA-Sand	Sample stub, Allocated to US Naval Laboratory. FIB-SEM.
C0105-037_000_00	IA-Sand	
C0105-038_000_00	IA-Sand	Sample stub, Allocated to U Gre Alpes. FIB-SEM.
C0105-039_000_00	IA-Sand	Sample stub, After FE-SEM observation, the sample was sent to U Hawaii. FIB-SEM
C0105-039_023_00	IA-Sand	Extracxted grain, A grain was cut out using FIB-SEM at U Hawaii. The grain was embedded in epoxy and ultramicrotomed.

C0105-039_023_01	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_02	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_03	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_04	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_05	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_06	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_07	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_08	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_09	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in a grid case. TEM.
C0105-039_023_10	IA-Sand	Ultrathinsections on microgrids, Ultrathi sections on a grid prepared at U Hawaii. Stored in another grid case. Originally it was stored in A5 in the above casea. TEM.
C0105-039_024_04	IA-Sand	FIB section, FIB section prepared at U Hawaii. TEM
C0105-040_000_00	IA-Sand	Sample stub, FE-SEM
C0105-040_060_01	IA-Sand	FIB section, Na-rich particle.TEM
C0105-040_060_02	IA-Sand	FIB section, Na-rich particle.TEM
C0105-040_060_03	IA-Sand	FIB section, Na-rich particle.TEM
C0105-040_060_04	IA-Sand	FIB section, Na-rich particle.TEM
C0105-040_084_01	IA-Sand	FIB section, TEM
C0105-041_000_00	IA-Sand	Sample stub, Allocated to Kobe U. FE-SEM
C0105-042_000_00	IA-Sand	Sample stub, Allocated to Hiroshima U. FIB-SEM.
C0105-042_000_01	IA-Sand	FIB section, Due to unknow grain number, 000 was assigned to the sample. TEM.
C0105-042_000_02	IA-Sand	FIB section, Due to unknow grain number, 000 was assigned to the sample. TEM.

C0105-042_000_03	IA-Sand	FIB section, Due to unknow grain number, 000 was assigned to the sample. TEM. Stored with FIB_4. TEM.
C0105-042_000_04	IA-Sand	FIB section, Due to unknow grain number, 000 was assigned to the sample. TEM. Stored with FIB_3. TEM.
C0105-042_000_05	IA-Sand	FIB section, Due to unknow grain number, 000 was assigned to the sample. TEM.
C0105-042_000_06	IA-Sand	FIB section, Due to unknow grain number, 000 was assigned to the sample. TEM.
C0105-043_001_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-043_002_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-043_004_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-043_005_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-043_006_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-043_008_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-043_009_00	IA-Sand	Grain, XCT. All grains were attached to Ti needles.
C0105-044_000_00	IA-Sand	Sample stub, Pressed into Indium to allocate to U Llille. But mistake.
C0105-045_000_00	IA-Sand	Sample stub, Four grains were set using Pt depo. Allocated to U Lille. Two grains were lost duirng FIB-SEM at U Lille.
C0105-045_001_01	IA-Sand	FIB section, Prepared at U Lille. The number on the case is 045-G1. G2 is in the same case. Not-analyzed.
C0105-045_001_02	IA-Sand	
C0105-045_004_01	IA-Sand	FIB section, Prepared at U Lille. But It is not clear the correlation between the sample numbers on the case and the descriptions by Hugues. G3, G4. Not-analyzed.
C0105-045_004_02	IA-Sand	FIB section, Prepared at U Lille. But It is not clear the correlation between the sample numbers on the case and the descriptions by Hugues. G3, G4. Not-analyzed.
C0105-046_000_00	IA-Sand	
C0105-047_000_00	IA-Sand	Sample stub, FIB-SEM
C0105-048_000_00	IA-Sand	Sample stub, Allocated to Harries but not-opened.
C0105-049_000_00	IA-Sand	Sample stub, FIB-SEM.
C0105-049_013_02	IA-Sand	FIB section on Au plate, AFM-IR using nanoIR3.
C0105-049_067_01	IA-Sand	TEM
C0106-02_Pellet18	IA-VOL	This pellet is still in its carrier, stored under N2.

C0106-09_LET710_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph
C0106-09_LET710_B	IA-VOL	Solution before Be fraction from cation chromatograph
C0106-09_LET710_C	IA-VOL	Mn fraction from anion chromatograph
C0106-09_LET710_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
C0106-10_LET711_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph
C0106-10_LET711_B	IA-VOL	Solution before Be fraction from cation chromatograph
C0106-10_LET711_C	IA-VOL	Mn fraction from anion chromatograph
C0106-10_LET711_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
C0106-11_LET712_A	IA-VOL	Solution between Be and Al fraction from cation chromatograph
C0106-11_LET712_B	IA-VOL	Solution before Be fraction from cation chromatograph
C0106-11_LET712_C	IA-VOL	Mn fraction from anion chromatograph
C0106-11_LET712_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
C0106-12	IA-VOL	powder (fragments), stored in glovebox
C0106-12_LET722_B	IA-VOL	Solution before Be fraction from cation chromatograph
C0106-12_LET722_C	IA-VOL	Mn fraction from anion chromatograph
C0106-12_LET722_D	IA-VOL	Remaining solution after separation of A, B, and C solutions
C0106-12_LET722_E	IA-VOL	CaF2 in a quartz vial
C0107-01	IA-Stone	Polished section, SEM, EPMA
C0107-1_intact	IA-IOM	
C0107-1_IOM_residue	IA-IOM	
C0107-10_IOM_residue	IA-IOM	
C0107-11_IOM_residue	IA-IOM	
C0107-12_IOM_residue	IA-IOM	Reflectance
C0107-13_IOM_residue	IA-IOM	FTIR
C0107-14_IOM_residue	IA-IOM	nanoSIMS
C0107-15_IOM_residue	IA-IOM	
C0107-16_IOM_residue	IA-IOM	
C0107-18_IOM_residue	IA-IOM	IOM residue on glass slide
C0107-19_IOM_residue	IA-IOM	IOM residue, isolates by HF/HCl treatment
C0107-24_IOM_residue	IA-IOM	Epoxy stub
C0107-25_IOM_residue	IA-IOM	TEM grid; box IOM slot C1
C0107-26_IOM_residue	IA-IOM	TEM grid; box IOM slot C2

C0107-28_IOM_residue	IA-IOM	TEM grid; box IOM slot C4
C0107-29_IOM_residue	IA-IOM	IOM residue, isolates by HF/HCl treatment, Cu disk
C0107-30_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), FTIR
C0107-31_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), FTIR
C0107-32_IOM_residue	IA-IOM	IOM residues (isolated by HF/HCl treatment), FTIR
C0107-33_IOM_residue	IA-IOM	On nanoSIMS base, NanoSIMS
C0107-34_IOM_residue	IA-IOM	on slide glass
C0107-35_IOM_residue	IA-IOM	on slide glass
C0107-39_IOM_residue	IA-IOM	FIB on STXM holder4 (Pos#4)
C0107-5_IOM_residue	IA-IOM	Reflectance
C0107-8_IOM_residue	IA-IOM	FTIR
C0107-9_IOM_residue	IA-IOM	
C0107-C1001	IA-Chem	Fraction Pb, Solvent H2O
C0107-C1002	IA-Chem	Fraction Fe, Solvent 4M HNO3
C0107-C1003	IA-Chem	Fraction Ca, Solvent 10M HNO3
C0107-C1004	IA-Chem	Fraction Cr, Solvent 5M HCl
C0107-C1005	IA-Chem	Fraction K-Mg-Ni, Solvent 1M HNO3
C0107-FC001_pFIB002	IA-Stone	
C0107-FG01	IA-Stone	particle, Not process
C0107-FG018	IA-Stone	Particle carbon fiber, XCT, XRD
C0107-FG06	IA-Stone	
C0107-FG07	IA-Stone	
C0107-FG08	IA-Stone	
C0107-FG09	IA-Stone	
C0107-FG10	IA-Stone	
C0107-FG12	IA-Stone	
C0107-FG14	IA-Stone	
C0107-FG15	IA-Stone	
C0107-FG20	IA-Stone	
C0107-FG21	IA-Stone	Particle carbon fiber, XRD
C0107-FG22	IA-Stone	Particle carbon fiber, XRD
C0107-FG23	IA-Stone	Particle carbon fiber, XRD
C0107-FG28	IA-Stone	Particle carbon fiber, XRD
C0107-FG29	IA-Stone	Particle carbon fiber, XRD
C0107-FG30	IA-Stone	Particle carbon fiber, XRD

C0107-FG32	IA-Stone	Particle carbon fiber, XRD
C0107-FG33	IA-Stone	Particle carbon fiber, XRD
C0107-FG34	IA-Stone	Particle carbon fiber, XRD
C0107-FG35	IA-Stone	Particle carbon fiber, XRD
C0107-FG36	IA-Stone	Particle carbon fiber, XRD
C0107-FG38	IA-Stone	Particle carbon fiber, XRD
C0107-FG39	IA-Stone	Particle carbon fiber, XRD
C0107-FG40	IA-Stone	
C0107-FG41	IA-Stone	
C0107-FG42	IA-Stone	
C0107-FG43	IA-Stone	
C0107-FG44	IA-Stone	
C0107-FG45	IA-Stone	
C0107-FG46	IA-Stone	
C0107-FG48	IA-Stone	
C0107-FG49	IA-Stone	
C0107-FG50	IA-Stone	
C0107-FG51	IA-Stone	
C0107-FG52	IA-Stone	
C0107-FG53	IA-Stone	
C0107-FG54	IA-Stone	
C0107-FG55	IA-Stone	
C0107-FG56	IA-Stone	
C0107-FG57	IA-Stone	
C0107-FG58	IA-Stone	
C0107-FG59	IA-Stone	
C0107-FG60	IA-Stone	
C0107-FG61	IA-Stone	
C0107-FG62	IA-Stone	
C0107-FG63	IA-Stone	
C0107-FG64	IA-Stone	
C0107-FG65	IA-Stone	
C0107-FG66	IA-Stone	
C0107-FG67	IA-Stone	
C0107-FG68	IA-Stone	

C0107-FG69	IA-Stone	
C0107-FG70	IA-Stone	
C0107-FG71	IA-Stone	
C0107-FG72	IA-Stone	
C0107-FG73	IA-Stone	
C0107-FG74	IA-Stone	
C0107-FG75	IA-Stone	
C0107-FG76	IA-Stone	
C0107-FG77	IA-Stone	
C0107-FG78	IA-Stone	
C0107-FG79	IA-Stone	
C0107-FG80	IA-Stone	Particle carbon fiber, XRD
C0107-FG81	IA-Stone	
C0107-FG82	IA-Stone	
C0107-FG83	IA-Stone	
C0107-FG84	IA-Stone	
C0107-FG85	IA-Stone	
C0107-FG86	IA-Stone	
C0107-He_01_02	IA-Sand	FIB section, FE-SEM, FIB, TEM
C0107-powder01	IA-Stone	Mini petridish
C0107-RBS02_001	IA-Stone	
C0107-RBS02_002	IA-Stone	
C0107-RBS1_M1	IA-Stone	Potted butt, SEM
C0107-RBS1_M1_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M10	IA-Stone	Potted butt, SEM
C0107-RBS1_M10_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M11	IA-Stone	Potted butt, SEM
C0107-RBS1_M2	IA-Stone	Potted butt, SEM
C0107-RBS1_M2_TEM01	IA-Stone	slice, SEM
C0107-RBS1_M3	IA-Stone	Potted butt, SEM
C0107-RBS1_M3_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M3_TEM02	IA-Stone	
C0107-RBS1_M3_TEM03	IA-Stone	
C0107-RBS1_M4	IA-Stone	Potted butt, SEM
C0107-RBS1_M4_TEM01	IA-Stone	Microtome, SEM

C0107-RBS1_M5	IA-Stone	Potted butt, SEM
C0107-RBS1_M5_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M5_TEM02	IA-Stone	
C0107-RBS1_M6	IA-Stone	Potted butt, SEM
C0107-RBS1_M6_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M7	IA-Stone	Potted butt, SEM
C0107-RBS1_M7_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M7_TEM02	IA-Stone	
C0107-RBS1_M8	IA-Stone	Potted butt, SEM
C0107-RBS1_M8_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M8_TEM02	IA-Stone	
C0107-RBS1_M9	IA-Stone	Potted butt, SEM
C0107-RBS1_M9_TEM01	IA-Stone	Microtome, SEM
C0107-RBS1_M9_TEM02	IA-Stone	
C0107-Rubber_stamp1	IA-Stone	Rubbler stamp
C0107-Rubber_Stamp2	IA-Stone	Rubbler stamp
C0107-Rubber_stamp3	IA-Stone	Rubbler stamp
C0107-S001	IA-SOM	
C0107-S002	IA-SOM	Particles remaining in a glass vial
C0107-S003	IA-SOM	Dried on silicon plate after extraction by hexane
C0107-S004	IA-SOM	Dried on silicon plate after extraction by DCM
C0107-S005	IA-SOM	Dried on silicon plate after extraction by MeOH
C0107-S006	IA-SOM	Dried on silicon plate after extraction by water
C0108-C1001	IA-Chem	Fraction Pb, Solvent H2O
C0108-C1002	IA-Chem	Fraction Ti, Solvent 9M HCl-0.05M HF
C0108-C1003	IA-Chem	Fraction Fe, Solvent 4M HNO3
C0108-C1004	IA-Chem	Fraction Ca, Solvent 10M HNO3
C0108-C1005	IA-Chem	Fraction Cr, Solvent 5M HCl
C0108-C1006	IA-Chem	Fraction K-Mg-Ni, Solvent 1M HNO3
C0109-08	IA-IOM	Fragment on SEM stub
C0109-1_intact	IA-IOM	FTIR, Raman
C0109-10_intact	IA-IOM	crushed, AFM-IR
C0109-11	IA-IOM	Fragments on glass slide,
C0109-12_intact	IA-IOM	FTIR, Raman, nanoSIMS
C0109-14	IA-IOM	Fragment on glass slide,

C0109-15_intact	IA-IOM	FTIR, Raman
C0109-16_intact	IA-IOM	FTIR, Raman
C0109-18_intact	IA-IOM	Au-embedding, FIB (UTokyo), STXM (PF) etc
C0109-19	IA-IOM	Fragment on glass slide
C0109-2_intact	IA-IOM	nanoSIMS, FIB, STXM
C0109-20_intact	IA-IOM	crushed, FTIR, Raman
C0109-21_intact	IA-IOM	crushed, FTIR
C0109-22_intact	IA-IOM	crushed, FTIR, Raman
C0109-23_intact	IA-IOM	crushed, FTIR
C0109-24_intact	IA-IOM	crushed analyzed by FTIR, Raman
C0109-25_intact	IA-IOM	crushed, FTIR
C0109-26_intact	IA-IOM	crushed, FTIR
C0109-27_intact	IA-IOM	crushed, FTIR
C0109-28_intact	IA-IOM	particle, FTIR, Raman
C0109-29_intact	IA-IOM	particle, FTIR, Raman
C0109-3_intact	IA-IOM	nanoSIMS, FIB, STXM
C0109-30_intact	IA-IOM	particle, FTIR, Raman
C0109-31_intact	IA-IOM	crushed, FTIR
C0109-32_intact	IA-IOM	crushed, FTIR
C0109-33_intact	IA-IOM	crushed, FTIR
C0109-34_intact	IA-IOM	particle, FTIR
C0109-35	IA-IOM	Epoxy stub
C0109-36	IA-IOM	Epoxy stub
C0109-37	IA-IOM	Epoxy stub
C0109-38	IA-IOM	TEM grid; box C0109 slot A1
C0109-39	IA-IOM	Si chip in capsule
C0109-4_intact	IA-IOM	crushed, AFM-IR
C0109-40	IA-IOM	TEM grid; box C0109 slot A2
C0109-42	IA-IOM	TEM grid; box C0109 slot A3
C0109-43	IA-IOM	TEM grid; box C0109 slot A4
C0109-44	IA-IOM	Epoxy stub
C0109-46	IA-IOM	TEM grid; box C0109 slot E1
C0109-47	IA-IOM	TEM grid; box C0109 slot E2
C0109-48	IA-IOM	TEM grid; box C0109 slot E3
C0109-49	IA-IOM	Epoxy stub

C0109-5_intact	IA-IOM	FTIR, Raman, nanoSIMS
C0109-50	IA-IOM	TEM grid; box C0109 slot J1
C0109-53	IA-IOM	Epoxy stub
C0109-56	IA-IOM	TEM grid; box C0109 slot N2
C0109-57	IA-IOM	TEM grid; box C0109 slot N3
C0109-58	IA-IOM	Si chip in capsule
C0109-59	IA-IOM	TEM grid; box C0109 slot N4
C0109-6_intact	IA-IOM	Reflectance
C0109-61_intact	IA-IOM	
C0109-62_intact	IA-IOM	
C0109-64_intact	IA-IOM	For FIB, separated from C0109-17
C0109-65_intact	IA-IOM	For FIB, separated from C0109-17
C0109-66_intact	IA-IOM	On nanoSIMS base, NanoSIMS
C0109-67_intact	IA-IOM	For FIB, separated from C0109-18
C0109-68_intact	IA-IOM	For FIB, separated from C0109-18
C0109-69_intact	IA-IOM	on slide glass, HF/HCl
C0109-70_intact	IA-IOM	on slide glass, HF/HCl
C0109-71_intact	IA-IOM	on slide glass, HF/HCl
C0109-72_intact	IA-IOM	on slide glass, HF/HCl
C0109-73_intact	IA-IOM	on slide glass
C0109-74_intact	IA-IOM	on slide glass
C0109-75_intact	IA-IOM	on slide glass
C0109-76_intact	IA-IOM	on slide glass
C0109-77_intact	IA-IOM	on slide glass
C0109-78_intact	IA-IOM	on slide glass
C0109-81_intact	IA-IOM	FIB on STXM holder5 (Pos#2)
C0109-82_intact	IA-IOM	FIB on STXM holder10 (Pos#4)
C0109-83_intact	IA-IOM	FIB on STXM holder11 (Pos#6)
C0109-9_intact	IA-IOM	FTIR, Raman, nanoSIMS

JAXA Special Publication JAXA-SP-22-004E

Hayabusa2 Asteroid Sample Catalog 2022

Edited and Published by: Japan Aerospace Exploration Agency
7-44-1 Jindaiji-higashimachi, Chofu-shi, Tokyo 182-8522 Japan
URL: https://www.jaxa.jp/
Date of Issue: January 20, 2023
Produced by: Matsueda Printing Inc.