

Table S1 Microprobe analyses of multiple regions of selected samples

SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	SO ₃	P ₂ O ₅	MnO	Total	Comment
84.28	0.07	0.06	0.02	0.04	0.07	0.02	0.17	1.16	-0.01	0.02	85.88	9120301A silica after glass
82.28	0.12	0.09	0.01	0.03	0.03	0.03	1.44	1.42	0.11	0.02	85.58	9120301A silica after glass
78.02	0.32	0.17	0.01	0.01	0.02	0.02	2.92	1.60	0.35	0.03	83.47	9120301A silica after glass
78.62	0.27	0.28	0.00	0.03	0.01	0.01	3.69	1.78	0.38	0.01	85.07	9120301A silica after glass
80.54	1.20	0.43	0.05	0.06	0.03	0.01	3.06	1.00	0.04	0.00	86.42	9120301A silica after glass
79.9	0.5	0.2	0.0	0.0	0.0	0.0	2.8	1.5	0.2	0.0	85.1	JB629 ave silica glass
65.81	0.71	0.87	0.08	0.11	0.11	0.03	3.44	0.77	0.04	0.01	71.97	9120301A silica after rind
69.60	0.51	0.41	0.04	0.13	0.09	0.03	2.26	0.73	0.03	-0.03	73.82	9120301A silica after rind
67.45	0.70	0.49	0.06	0.13	0.09	0.02	2.01	0.78	0.03	0.01	71.77	9120301A silica after rind
70.87	0.57	0.39	0.07	0.16	0.06	0.03	1.24	0.62	0.03	-0.02	74.02	9120301A silica after rind
70.44	0.40	0.34	0.06	0.12	0.04	0.01	0.94	0.54	0.00	-0.01	72.88	9120301A silica after rind
76.82	0.46	0.26	0.06	0.13	0.07	0.01	0.67	0.35	0.02	-0.01	78.85	9120301A silica after rind
70.2	0.6	0.5	0.1	0.1	0.1	0.0	1.8	0.6	0.0	0.0	73.9	JB629 ave silica rind
SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	SO ₃	P ₂ O ₅	MnO	Total	Comment
49.83	12.87	11.23	8.41	10.66	2.25	0.39	2.23	0.06	0.32	0.19	98.43	9120301b glass
49.56	12.98	11.29	8.31	10.56	2.21	0.36	2.57	0.05	0.34	0.15	98.39	9120301b glass
49.35	12.98	10.96	8.30	10.30	2.18	0.39	2.42	0.07	0.35	0.24	97.55	9120301b glass
49.48	13.09	11.14	8.26	10.64	2.27	0.44	2.51	0.07	0.33	0.14	98.37	9120301b glass
49.6	13.0	11.2	8.3	10.5	2.2	0.4	2.4	0.1	0.3	0.2	98.2	JB630 ave glass
58.46	22.63	8.65	1.93	0.77	0.15	0.10	1.55	0.14	0.20	0.09	94.67	9120301b rind
61.55	22.68	8.30	1.93	0.64	0.12	0.13	1.64	0.13	0.17	0.05	97.33	9120301b rind
52.85	18.67	9.17	1.78	0.82	0.08	0.12	1.67	0.28	0.12	0.06	85.62	9120301b rind
57.27	14.30	13.17	2.19	0.93	0.14	0.12	3.74	0.25	0.12	0.08	92.31	9120301b rind
57.5	19.6	9.8	2.0	0.8	0.1	0.1	2.2	0.2	0.2	0.1	92.5	JB630 ave rind
SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	SO ₃	P ₂ O ₅	MnO	Total	Comment
49.71	13.03	11.27	8.50	10.28	2.29	0.40	2.30	0.05	0.30	0.09	98.23	9120301c glass
49.28	12.94	10.98	8.46	10.41	2.34	0.37	2.55	0.11	0.33	0.18	97.96	9120301c glass
49.5	13.0	11.1	8.5	10.3	2.3	0.4	2.4	0.1	0.3	0.1	98.1	JB631 ave glass
46.99	10.75	20.61	4.14	0.14	0.02	0.01	4.25	0.37	0.09	0.07	87.44	9120301c rind
45.80	10.83	20.41	3.95	0.15	0.01	0.02	4.31	0.39	0.10	0.18	86.17	9120301c rind
45.60	10.99	19.92	3.68	0.14	0.00	0.01	4.12	0.44	0.08	0.04	85.02	9120301c rind
45.75	11.37	19.84	3.55	0.11	0.01	0.01	4.12	0.35	0.09	0.04	85.25	9120301c rind
46.0	11.0	20.2	3.8	0.1	0.0	0.0	4.2	0.4	0.1	0.1	86.0	JB631 ave rind
50.36	17.29	4.09	14.43	0.08	0.04	0.01	-0.02	0.88	0.67	0.91	88.74	9120301c Mg smectite
50.52	17.02	4.08	15.09	0.09	0.04	0.00	0.03	0.83	0.69	0.67	89.05	9120301c Mg smectite
50.79	17.49	4.28	14.84	0.07	0.01	-0.02	-0.01	0.81	0.70	0.77	89.72	9120301c Mg smectite
48.98	17.25	5.72	14.87	0.12	0.03	0.01	0.03	1.49	0.87	0.37	89.76	9120301c Mg smectite
50.2	17.3	4.5	14.8	0.1	0.0	0.0	0.0	1.0	0.7	0.7	89.3	JB631 ave Mg-smectite
1.10	8.41	51.95	0.03	0.02	-0.01	-0.01	0.10	10.41	4.54	0.01	76.55	9120301c bright
2.52	15.24	44.36	0.24	0.03	-0.03	0.00	0.18	11.79	4.21	0.00	78.55	9120301c bright
1.00	7.49	34.85	0.03	0.03	0.04	0.01	0.12	8.58	4.27	0.03	56.46	9120301c bright
1.08	7.99	46.15	0.05	0.03	0.08	0.00	0.13	7.84	3.66	0.05	67.05	9120301c bright
1.55	10.78	52.47	0.07	0.03	0.07	0.01	0.17	8.73	3.96	-0.03	77.80	9120301c bright
1.53	10.57	55.66	0.06	0.03	0.08	0.01	0.15	9.07	4.11	0.00	81.26	9120301c bright
3.05	9.93	52.58	0.14	0.04	0.07	0.03	0.19	8.20	3.84	-0.02	78.04	9120301c bright
1.7	10.1	48.3	0.1	0.0	0.0	0.0	0.1	9.2	4.1	0.0	73.7	JB631 ave bright spots