

Table 2: Volatile elements* and cerium concentrations corrected from olivine addition and Pb isotopes in 29 olivine-hosted glassy melt inclusions from Iwate volcano.

	CO ₂ ppm	H ₂ O wt%	F ppm	S ppm	Cl ppm	Ce ppm	H ₂ O/Ce	²⁰⁷ Pb/ ²⁰⁶ Pb	²⁰⁸ Pb/ ²⁰⁶ Pb	²⁰⁶ Pb/ ²⁰⁴ Pb	²⁰⁷ Pb/ ²⁰⁴ Pb	²⁰⁸ Pb/ ²⁰⁴ Pb					
ITM1.1	368(140)	2.82(3)	123(2)	1505(20)	408(7)	5.4(2)	5200(700)	0.836	0.002	2.084	0.004	19.20	0.13	16.05	0.12	40.30	0.31
ITM2	315(320)	2.80(1)	164(6)	1071(30)	414(10)	4.7(2)	5900(400)	0.840	0.002	2.081	0.004	18.49	0.10	15.53	0.09	38.75	0.21
ITM5.1	331(5)	2.80(3)	178(1)	1952(10)	394(3)	4.0(1)	7100(300)	0.844	0.004	2.094	0.007	18.31	0.18	15.45	0.13	38.61	0.38
ITM5.2	5(1)	0.77(1)	171(2)	258(2)	350(3)	5.4(3)	1480(90)	0.843	0.001	2.084	0.003	18.56	0.10	15.65	0.08	38.95	0.20
ITM6	28(8)	2.65(1)	155(1)	1527(2)	401(1)	n.d.	n.d.	0.838	0.004	2.084	0.008	18.50	0.30	15.49	0.28	38.80	0.67
ITM8	175(41)	2.74(3)	200(30)	951(14)	423(20)	4.7(4)	5700(1100)	0.840	0.001	2.085	0.004	18.82	0.14	15.81	0.12	39.52	0.30
ITM10.1	479(23)	2.71(1)	159(4)	1273(20)	463(10)	5.1(2)	5300(400)	0.837	0.001	2.081	0.003	18.99	0.12	15.90	0.10	39.81	0.23
ITM11	224(3)	2.57(1)	189(1)	932(5)	387(2)	5.1(2)	5100(200)	0.836	0.002	2.083	0.004	19.23	0.20	16.07	0.16	40.32	0.40
ITM12	6446(200)	2.85(2)	143(1)	1515(8)	405(1)	3.8(1)	7600(300)	0.841	0.002	2.082	0.004	18.86	0.16	15.85	0.13	39.55	0.34
ITM13	3835(590)	2.44(1)	131(3)	1478(40)	372(9)	3.7(2)	6400(600)	0.842	0.003	2.074	0.007	17.74	0.24	14.94	0.19	37.04	0.44
ITM14	32(1)	1.00(1)	138(1)	456(1)	337(2)	4.9(2)	2000(100)	0.839	0.002	2.079	0.003	18.70	0.11	15.68	0.10	39.15	0.23
ITM15.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.843	0.005	2.091	0.011	19.35	0.21	16.28	0.23	40.70	0.54
ITM15.2	177(110)	2.38(1)	178(1)	644(2)	409(3)	4.1(3)	5900(400)	0.836	0.002	2.084	0.005	18.82	0.12	15.73	0.09	39.49	0.27
ITM16	546(68)	2.28(2)	144(1)	1671(20)	385(3)	4.4(2)	5200(300)	0.841	0.003	2.085	0.007	18.40	0.21	15.46	0.19	38.62	0.40
ITM17	4348(640)	0.62(1)	230(1)	198(1)	427(2)	4.7(2)	1310(90)	0.850	0.002	2.097	0.004	18.43	0.15	15.66	0.11	38.93	0.30
ITM19.1	205(71)	0.41(4)	178(16)	464(40)	406(40)	6.0(3)	690(100)	0.840	0.001	2.084	0.002	18.79	0.07	15.77	0.06	39.44	0.14
ITM23	1071(190)	0.22(1)	196(1)	204(1)	361(2)	5.9(2)	370(30)	0.839	0.001	2.083	0.003	18.84	0.12	15.80	0.10	39.52	0.25
ITM24	77(10)	0.27(1)	204(1)	263(1)	372(2)	6.0(3)	450(40)	0.842	0.001	2.082	0.003	18.63	0.09	15.68	0.07	39.06	0.19
IEM26	755(62)	2.37(3)	173(1)	1805(6)	339(2)	2.9(3)	8200(800)	0.844	0.003	2.089	0.007	18.13	0.18	15.29	0.14	38.13	0.37
IEM28.1	380(6)	3.65(3)	147(1)	1705(10)	352(3)	10(2)	3600(800)	0.843	0.002	2.087	0.004	18.53	0.16	15.61	0.12	38.95	0.32
IEM31.2	4714(440)	0.77(1)	60(1)	287(3)	515(8)	6.9(4)	1120(70)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
IEM34.1	46(4)	0.82(1)	216(1)	288(1)	393(2)	6.2(2)	1330(70)	0.839	0.001	2.079	0.002	18.63	0.11	15.63	0.09	39.00	0.22
IEM34.3	326(11)	2.44(1)	121(1)	1518(5)	366(2)	2.5(2)	9700(1000)	0.839	0.001	2.091	0.003	19.13	0.11	16.04	0.10	40.27	0.24
IEM34.4	55(4)	0.69(1)	192(1)	951(5)	348(2)	6.4(4)	1070(80)	0.839	0.002	2.089	0.003	18.77	0.08	15.75	0.06	39.47	0.15
IEM35	164(4)	2.94(2)	174(1)	1071(4)	381(3)	4.4(3)	6600(400)	0.837	0.002	2.082	0.004	18.64	0.16	15.60	0.14	39.08	0.34
IEM36	n.d.	n.d.	74(58)	1298(30)	397(30)	3.7(2)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
IEM37	n.d.	n.d.	158(11)	48(25)	448(30)	n.d.	n.d.	0.839	0.001	2.077	0.003	18.34	0.08	15.40	0.07	38.38	0.18
IEM38	n.d.	n.d.	143(96)	407(37)	514(26)	n.d.	n.d.	0.841	0.001	2.076	0.003	18.34	0.10	15.41	0.09	38.34	0.18
IEM39	n.d.	n.d.	n.d.	1058(60)	411(37)	n.d.	n.d.	0.840	0.003	2.069	0.007	18.24	0.20	15.31	0.17	38.01	0.41

Analytical uncertainties are indicated in parenthesis with last significant digits (1 standard deviation of analysis). Errors for Pb-isotope compositions represent 2 standard error of the mean. n.d.

= not determined. * No vapor bubble correction was applied on the volatile concentration measurements in the melt.