

Table A2.3 - Comparison of FTIR solubility results with numerical models

Sample	FTIR		Papale		Iacono-Marziano		Ghiorso & Gualda	
	H ₂ O [wt%]	CO ₂ [ppm]	H ₂ O [wt%]	CO ₂ [ppm]	H ₂ O [wt%]	CO ₂ [ppm]	H ₂ O [wt%]	CO ₂ [ppm]
VES79_0.5_1	0.09	280	0.07	50			0.27	275
VES79_0.5_6	2.08	0	2.17	0			2.44	0
VES79_1_1	0.31	520	0.15	170			0.40	560
VES79_1_2	0.97	450	0.95	160			1.27	510
VES79_1_3	1.73	410	1.69	140			1.99	410
VES79_1_4	2.26	350	2.35	100			2.64	280
VES79_1_5	3.18	220	3.22	30			3.53	70
VES79_1_6	3.63	0	3.43	10			3.74	20
VES79_1.5_1	0.24	770	0.16	330			0.44	850
VES79_1.5_6	4.25	0	4.53	0			4.95	0
VES79_2_1	0.24	1160	1.20	550			1.60	1140
VES79_2_2	1.33	1010	1.79	530			2.17	1070
VES79_2_3	2.64	1050	2.60	490			2.97	920
VES79_2_4	3.43	900	3.54	380			3.94	680
VES79_2_5	4.69	600	4.59	210			5.07	330
VES79_2_6	5.87	0	5.21	60			5.76	90
VES79_2.5_1	0.23	1430	0.19	820			0.48	1470
VES79_2.5_6	6.41	0	6.23	10			6.94	10
VES79_3_1	0.39	1790	1.47	1150			0.46	1780
VES79_3_2	1.83	1690	2.50	1110			1.58	1840
VES79_3_3	2.95	1710	3.47	1010			2.97	1690
VES79_3_4	4.44	1510	4.52	830			4.37	1350
VES79_3_5	5.72	770	5.88	450			6.03	780
VES79_3_6	7.37	0	6.82	80			7.84	0
SULm_0.5_1	0.35	1610	0.22	0	0.42	1640	0.41	1100
SULm_0.5_6	2.61	0	2.43	0	2.32	10	2.43	10
SULm_1_1	0.47	2940	0.40	20	0.65	3420	0.60	2270
SULm_1_2	1.36	2660	0.84	20	1.07	3190	1.00	2170
SULm_1_3	2.02	2200	1.51	30	1.67	2690	1.59	1880
SULm_1_4	2.74	1780	2.29	20	2.36	1910	2.31	1370
SULm_1_5	3.48	1330	3.04	20	3.00	1010	3.05	723
SULm_1_6	3.74	0	3.77	0	3.61	0	3.79	0
SULm_1.5_1	0.36	3850	0.30	100	0.56	5460	0.51	3530
SULm_1.5_6	4.64	0	4.67	10	4.65	250	4.80	180
SULm_2_1	0.50	5680	0.27	330	0.55	7620	0.51	4830
SULm_2_2	1.65	5450	1.56	350	1.87	6830	1.57	4660
SULm_2_3	2.88	4650	2.29	350	2.59	6050	2.41	4180
SULm_2_4	3.84	3730	3.34	310	3.62	4580	3.45	3270
SULm_2_5	4.74	2460	4.54	190	4.79	2430	4.72	1800
SULm_2_6	5.83	0	5.70	0	5.88	0	5.99	0
SULm_2.5_1	0.37	6320	0.26	840	0.55	9950	0.50	6190
SULm_2.5_6	5.16	0	6.44	20	6.95	140	6.86	110
SULm_3_1	0.65	8460	0.45	1780	0.80	12420	0.70	7670
SULm_3_2	2.19	7700	1.53	1640	1.95	11800	1.73	7600
SULm_3_3	3.58	6590	2.86	1460	3.36	10280	3.01	6850
SULm_3_4	4.75	5740	4.30	1170	4.93	7770	4.51	5320
SULm_3_5	6.29	3700	5.81	680	6.63	4170	6.20	2930
SULm_3_6	7.29	0	6.96	150	7.88	810	7.51	580

Notes: Fe was assumed to be pure Fe₂O₃ excluding the model of Iacono-Marziano (2007), where all Fe was assumed to be pure FeO