Supplementary Material - D - Whole rock geochemical compositions and mass-balance calculations

Table (D1) Major element whole-rock compositions by X-ray fluorescence.

Table (D2) Calculations of the liquid compostition for TR-IV, LM-I and APAP literature data (Melluso et al., 2008; Meyer et al., 1994 and Guarino et al., 2008).

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Table D1. Major element whole-rock compositions by X-ray fluorescence.

Intrusion	**LM-I**			**TR-IV**			
Sample	**LM-3**	**LMI-B1**	**LMI-C1**	**TR-4**	**TRIV-5**	**TRIV-9**	**TRIV-9(d)**
SiO2	29.19	29.79	30.14	34.57	33.03	32.85	32.64
TiO2	2.413	2.327	2.372	1.052	1.293	1.221	1.13
Al2O3	1.86	1.81	1.98	2.21	2.08	2.01	1.81
Fe2O3	10.93	11.06	11	9.44	9.36	9.26	9.21
MnO	0.202	0.201	0.203	0.194	0.19	0.183	0.183
MgO	29.26	30.48	30.48	34.64	31.08	31.75	32.35
CaO	12.15	10.74	10.78	3.68	8.35	7.92	7.8
Na2O	<0.02	<0.03	<0.04	<0.05	0.06	0.05	0.06
K2O	1.16	0.97	0.88	0.69	1.18	1.07	0.96
P2O5	2.272	2.434	2.467	1.097	1.397	1.376	1.362
LOI	9.64	9.22	9.82	10.94	10.98	10.99	10.92
Total	99.08	99.03	100.12	98.51	99.00	98.68	98.43
Mg#	72.8	73.4	73.5	78.6	76.9	77.4	77.8

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Table D2. Calculations of the liquid compostition for TR-IV, LM-I and APAP literature data (IND-Indaiá; LM1-Limeira I; IND1-Indaiá 1; PAN- Pântano*;* Melluso et al., 2008; Meyer et al., 1994 and Guarino et al., 2008*).*

Samples	LM-3	LMI-B1	LMI-C1	TR-4	TRIV-5	TRIV-9	TRIV-9	APAP-IND	APAP-LM1	APAP-IND1	APAP-PAN	APAP-LM1	APAP-LEMES	Ol	Phl
Xenocrystals (cores and intermediated regions of mega-, macro and microcrystal)															
Ol (%)	40	40	15	40	40	35	35	40	40	40	40	40	40	Melluso et al. (2008)	Melluso et al. (2008)
Phl (%)	5	7	5	5	5	0	0	0	0	0	0	0	0		
SiO2	29.19	29.79	30.14	34.57	33.03	32.85	32.64	25.28	29.2	27.3	31.7	28.40	29.20	39.91	38.68
TiO2	2.41	2.33	2.37	1.05	1.29	1.22	1.13	2.28	2.62	2.54	6.44	2.00	2.50	0.00	5.25
Al2O3	1.86	1.81	1.98	2.21	2.08	2.01	1.81	2.44	1.87	2.09	2.76	2.20	2.00	0.00	12.31
FeOT	9.83	9.95	9.90	8.49	8.42	8.33	8.29	10.56	9.09	9.45	12.33	10.44	9.63	15.17	6.68
Fe2O3T	10.93	11.06	11.00	9.44	9.36	9.26	9.21	11.74	10.1	10.5	13.7	11.60	10.70	16.86	7.42
MnO	0.20	0.20	0.20	0.19	0.19	0.18	0.18	0.23	0.21	0.20	0.19	0.20	0.20	0.14	0.06
MgO	29.26	30.48	30.48	34.64	31.08	31.75	32.35	23.43	28.3	26.6	19.10	27.50	27.60	43.31	21.77
CaO	12.15	10.74	10.78	3.68	8.35	7.92	7.80	15.39	11.3	13.2	10.5	12.70	11.00	0.12	0.00
Na2O	0.02	0.03	0.04	0.05	0.06	0.05	0.06	0.51	0.76	0.25	0.26	1.00	0.10	0.00	0.06
K2O	1.16	0.97	0.88	0.69	1.18	1.07	0.96	0.85	0.96	0.74	1.98	1.20	1.00	0.00	10.69
P2O5	2.27	2.43	2.47	1.10	1.40	1.38	1.36	3.24	2.13	2.61	0.63	2.30	2.70	0.00	0.00
LOI	9.64	9.22	9.82	10.94	10.98	10.99	10.92	9.9	9.21	9.10	10.50	7.90	10.80	0.00	4.00
Total	99.08	99.03	100.12	98.51	99.00	98.68	98.43	96.4	96.33	95.28	98.99	97.20	97.80	98.78	95.73
Compositions discounting the volumes of xenocrysts															
SiO2	20.53	20.98	27.77	30.31	27.51	29.05	28.73	15.53	22.06	18.89	26.23	20.73	22.06		
TiO2	3.91	3.70	2.64	1.44	1.87	1.88	1.74	3.80	4.37	4.23	10.73	3.33	4.17		
Al2O3	2.26	1.79	1.71	2.90	2.66	3.09	2.78	4.07	3.12	3.48	4.60	3.67	3.33		
FeOT	6.24	6.45	9.11	3.80	3.67	4.65	4.58	7.49	5.03	5.63	10.43	7.28	5.93		
Fe2O3T	6.94	7.16	10.13	4.23	4.08	5.17	5.09	8.33	5.59	6.26	11.59	8.09	6.59		
MnO	0.26	0.27	0.22	0.25	0.24	0.21	0.21	0.29	0.26	0.24	0.22	0.24	0.24		
MgO	19.72	21.95	28.62	29.50	23.03	25.53	26.45	10.18	18.29	15.46	2.96	16.96	17.13		
CaO	22.00	20.17	13.45	6.60	15.09	12.12	11.94	25.57	18.75	21.92	17.42	21.09	18.25		
Na2O	0.03	0.05	0.05	0.09	0.10	0.08	0.09	0.85	1.27	0.42	0.43	1.67	0.17		
K2O	1.14	0.42	0.43	0.28	1.17	1.65	1.48	1.42	1.60	1.23	3.30	2.00	1.67		
P2O5	4.13	4.59	3.08	1.99	2.54	2.12	2.10	5.40	3.55	4.35	1.05	3.83	4.50		
LOI	17.16	14.38	12.28	19.89	19.96	16.91	16.80	16.50	12.68	15.17	17.50	13.17	18.00		
CI	1.04	1.00	1.00	1.11	1.19	1.12	1.07	1.57	1.23	1.27	3.27	1.24	1.25		
mg#	0.85	0.86	0.85	0.93	0.92	0.91	0.91	0.71	0.87	0.83	0.34	0.81	0.84		
Anhydrous-base normalization															
SiO2	25.59	26.11	31.89	39.28	35.32	36.15	35.87	20.82	28.18	24.90	33.89	25.65	28.48		
TiO2	4.87	4.60	3.03	1.86	2.41	2.34	2.17	5.09	5.58	5.58	13.87	4.13	5.38		
Al2O3	2.82	2.23	1.96	3.76	3.42	3.85	3.48	5.45	3.98	4.59	5.94	4.54	4.30		
FeOT	7.78	8.02	10.46	4.93	4.71	5.79	5.72	10.04	6.43	7.42	13.48	9.01	7.66		
MnO	0.32	0.33	0.26	0.32	0.31	0.26	0.26	0.39	0.33	0.32	0.29	0.30	0.31		
MgO	24.58	27.31	32.86	38.23	29.56	31.76	33.03	13.64	23.36	20.38	3.83	20.99	22.11		
CaO	27.43	25.11	15.45	8.56	19.38	15.08	14.90	34.28	23.95	28.89	22.51	26.10	23.57		
Na2O	0.04	0.06	0.05	0.11	0.13	0.10	0.12	1.14	1.62	0.55	0.56	2.06	0.22		
K2O	1.42	0.52	0.50	0.37	1.51	2.05	1.84	1.90	2.04	1.63	4.26	2.48	2.15		
P2O5	5.15	5.72	3.54	2.58	3.26	2.63	2.62	7.24	4.53	5.73	1.36	4.74	5.81		
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		