

Supplementary material

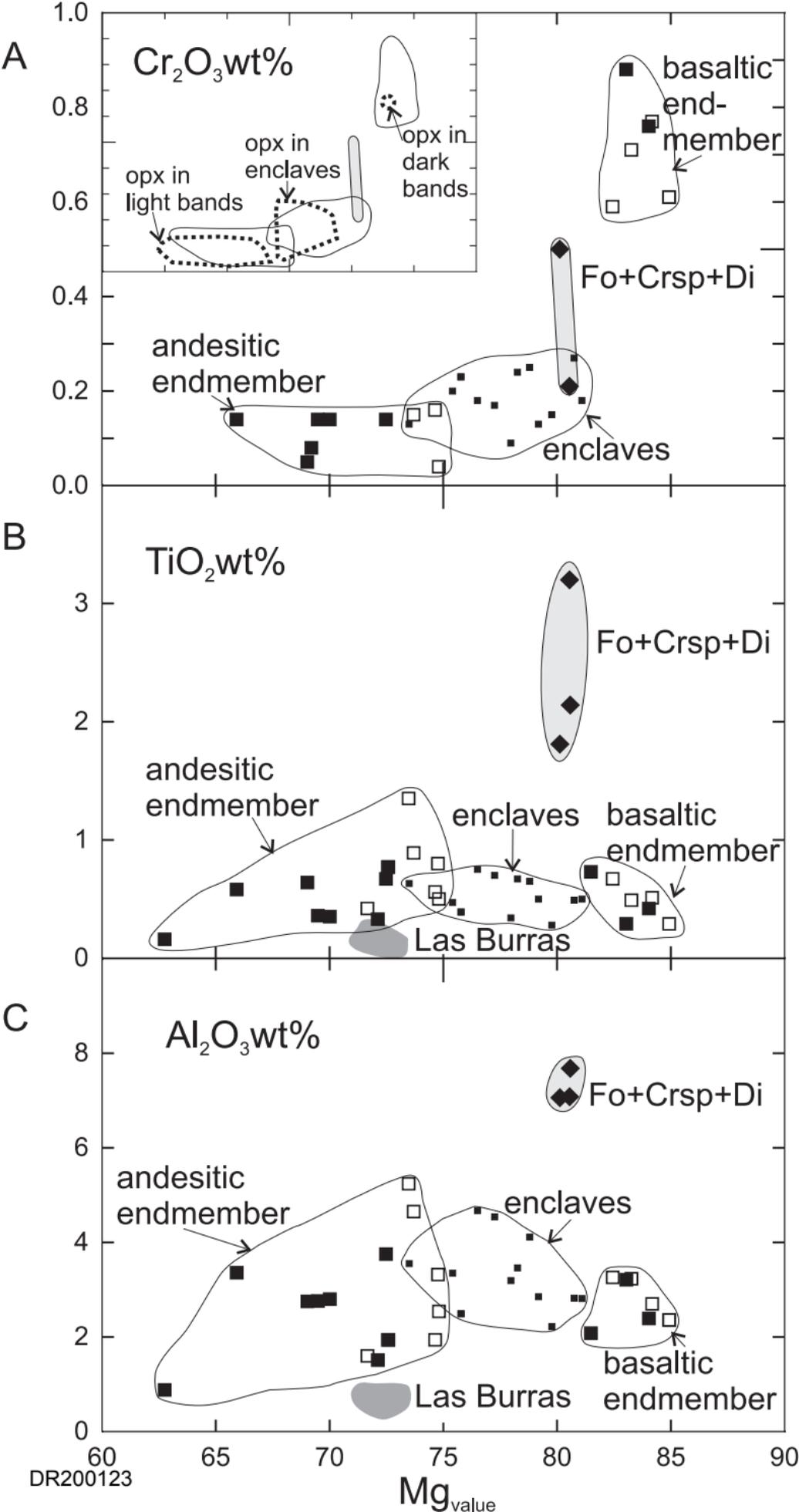
Figure DR1. a) Cr_2O_5 wt% vs Mg_v ($\text{Mg}/\text{Mg}+\text{Fe}_t$) of clinopyroxene in basaltic andesites (full squares: cores; open squares: rims), their pyroxenite enclaves (small squares) and the Fo+Cr-spinel+Di clusters (diamonds); fields group clinopyroxene from the light and dark mingled bands, corresponding to the basaltic and andesitic end-members of mixing. In the inset: the same diagram with dotted fields showing the composition of orthopyroxene in the dark and light bands of basaltic andesites and in pyroxenite enclaves. b, c) TiO_2 wt% and Al_2O_3 wt% vs Mg_v of clinopyroxene in basaltic andesites; symbols and fields as in Figure DR1a. The field of clinopyroxene in Las Burras intrusion is also shown. Data are available as supplemental material in Table DR3.

Figure DR2. Selected major and trace elements variation diagrams of Las Burras-Almagro-El Toro rocks; symbols as in Figure 8.

Table DR1 – Major and trace elements analyses of Las Burras rocks. Analytical methods in Appendix.

Table DR2 - Major and trace elements analyses of the volcanic rocks of Las Burras-Almagro-El Toro complex. Analytical methods in Appendix.

Table DR3 - Representative analyses of the main mineral phases in the Las Burras and Almagro rocks. Analytical details in Appendix.



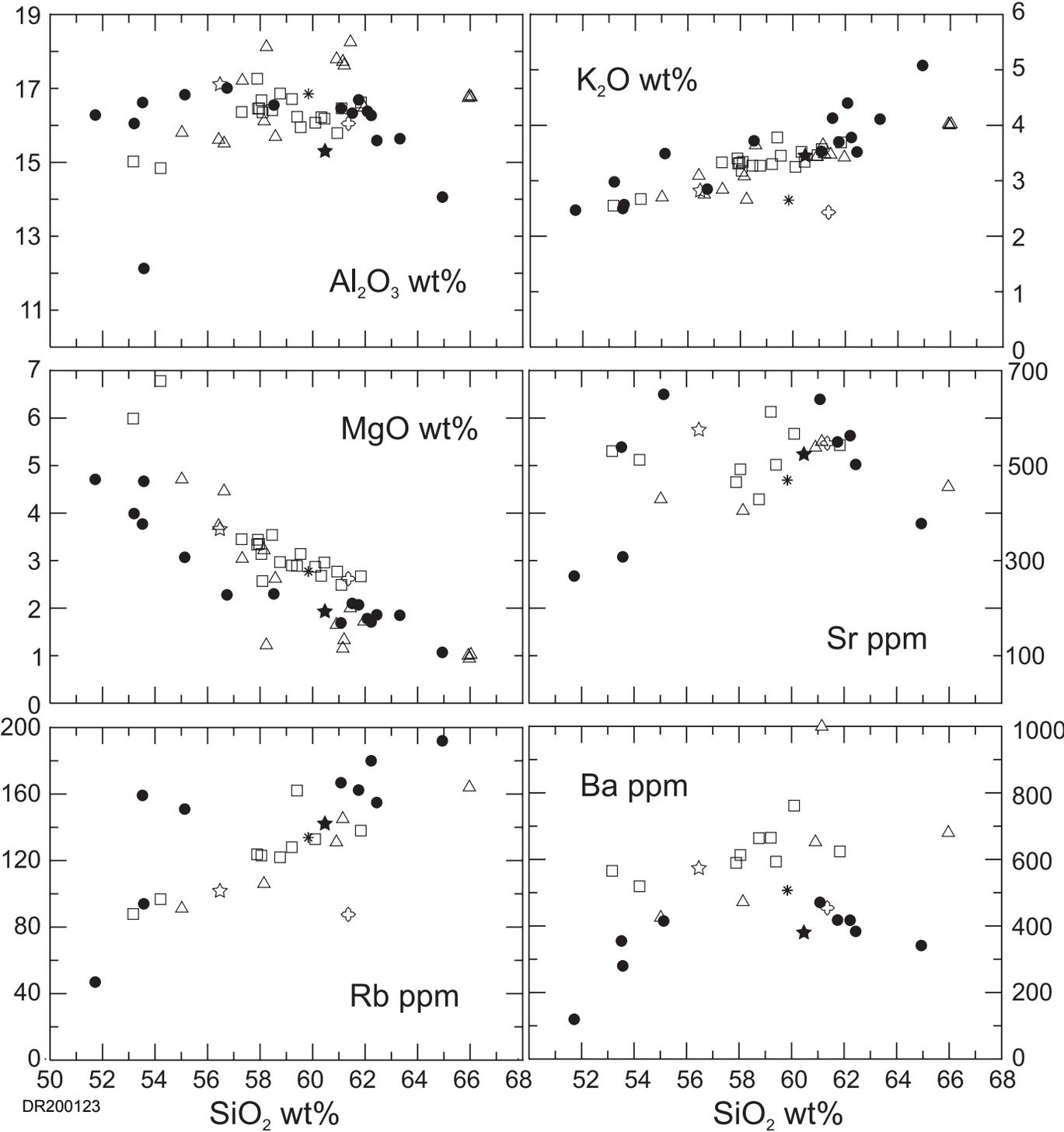


Table DR1 - Major and trace elements analyses of Las Burras rocks. Analytical details in Appendix.

Sample Member	M-2 Las Burras	M-3 Las Burras	A-15 Las Burras	A-37 Las Burras	A-40 Las Burras	TA-100 Las Burras	TA-101 Las Burras	TA-102 Las Burras	TA-104 Las Burras	TA-241 Las Burras	TS108 Las Burras	TS209 Las Burras	TS302 Las Burras	TS303 Las Burras
Latitude S	24°18'55"	24°18'55"	24°18'55"	24°20'30"	24°19'59"	24°21'19"	24°21'19"	24°21'19"	24°21'19"	24°18'55"	24°20'47"	24°20'40"	24°19'56"	24°19'56"
Longitude W	65°52'20"	65°52'20"	65°52'20"	65°52'37"	65°52'30"	65°53'52"	65°53'52"	65°53'52"	65°53'52"	65°52'20"	65°53'53"	65°53'08"	65°51' 36"	65°51'36"
SiO ₂ (wt%)	61.75	58.52	61.51	55.13	62.23	53.57	63.32	53.20	64.94	62.08	62.44	51.72	61.08	53.52
TiO ₂	0.69	0.77	0.72	1.01	0.58	1.34	0.63	1.29	0.41	0.67	0.66	1.20	0.66	1.09
Al ₂ O ₃	16.69	16.55	16.33	16.83	16.27	12.13	15.64	16.05	14.06	16.38	15.59	16.28	16.46	16.62
Fe ₂ O ₃	6.18	6.50	5.80	8.11	5.02	13.45	5.28	9.52	3.91	5.55	5.36	9.55	5.63	8.98
MnO	0.16	0.15	0.14	0.17	0.11	0.24	0.09	0.26	0.07	0.13	0.13	0.19	0.15	0.28
MgO	2.07	2.30	2.10	3.07	1.71	4.67	1.85	3.99	1.07	1.78	1.86	4.71	1.69	3.77
CaO	5.57	5.83	5.33	7.18	4.67	7.25	4.71	7.02	3.24	4.86	4.90	9.13	5.35	7.84
Na ₂ O	3.19	3.29	3.22	3.24	3.58	2.44	2.99	3.28	2.69	3.18	3.23	2.96	3.56	3.38
K ₂ O	3.70	3.72	4.13	3.49	3.78	2.57	4.11	2.98	5.08	4.40	3.52	2.47	3.53	2.50
P ₂ O ₅	0.32	0.36	0.31	0.45	0.23	0.55	0.26	0.41	0.17	0.30	0.27	0.52	0.31	0.37
L.O.I.	0.35	0.63	0.53	0.37	0.55	0.58	0.78	0.91	0.46	0.49	0.59	0.32	0.44	0.56
Be (ppm)	2.29	-	-	2.72	3.20	3.60	-	-	3.50	-	2.22	0.73	2.47	3.14
Sc	10	-	-	13	8	26	-	-	6	-	9	10	8	20
V	104	-	-	168	81	262	-	-	70	-	97	96	90	187
Cr	12	-	-	26	24	44	-	-	10	-	12	27	9	29
Co	13	-	-	19	9	26	-	-	5	-	83	18	11	22
Ni	8	-	-	14	9	16	-	-	4	-	9	11	7	16
Cu	22	-	-	26	19	94	-	-	35	-	41	28	17	70
Rb	162	-	-	151	180	94	-	-	192	-	155	47	167	159
Sr	550	-	-	650	563	308	-	-	378	-	502	268	639	539
Y	25.0	-	-	26.2	22.1	43.5	-	-	16.1	-	21.3	10.2	23.6	31.9
Zr ⁽¹⁾	162	-	-	179	176	266	-	-	114	-	-	-	-	-
Nb	31.6	-	-	32.9	37.0	41.0	-	-	23.7	-	26.5	10.2	36.9	46.9
Cs	7.78	-	-	5.00	3.10	2.12	-	-	3.50	-	4.40	2.56	4.25	6.73
Ba	418	-	-	415	417	280	-	-	341	-	384	119	471	355
La	34.5	-	-	34.0	35.0	53.0	-	-	27.2	-	34.0	10.6	38.7	32.9
Ce	63.5	-	-	64.0	63.0	97.0	-	-	47.0	-	60.4	21.0	69.8	64.1
Pr	7.3	-	-	7.7	7.1	11.8	-	-	5.2	-	6.8	2.7	7.9	7.8
Nd	27.7	-	-	30.1	26.0	47.0	-	-	18.5	-	24.6	10.9	29.0	30.5
Sm	5.3	-	-	5.9	4.8	9.6	-	-	3.5	-	4.7	2.4	5.4	6.2
Eu	1.45	-	-	1.75	1.35	1.82	-	-	0.84	-	1.29	0.68	1.43	1.36
Gd	4.6	-	-	5.1	4.0	8.3	-	-	2.9	-	4.0	2.2	4.7	5.7
Tb	0.72	-	-	0.80	0.64	1.31	-	-	0.44	-	0.62	0.33	0.69	0.92

Dy	4.1	-	-	4.6	3.6	7.5	-	-	2.5	-	3.5	1.8	4.0	5.2
Ho	0.83	-	-	0.90	0.71	1.49	-	-	0.52	-	0.73	0.36	0.81	1.11
Er	2.27	-	-	2.44	2.02	4.05	-	-	1.47	-	1.95	0.93	2.23	2.98
Tm	0.35	-	-	0.37	0.32	0.62	-	-	0.23	-	0.30	0.13	0.35	0.46
Yb	2.22	-	-	2.22	2.04	3.70	-	-	1.52	-	1.94	0.81	2.10	2.88
Lu	0.32	-	-	0.33	0.28	0.53	-	-	0.23	-	0.28	0.11	0.31	0.42
Ta	2.50	-	-	2.33	3.11	2.87	-	-	1.95	-	2.29	0.79	2.76	2.69
Tl	0.95	-	-	0.88	0.92	0.47	-	-	0.92	-	0.91	0.36	0.99	1.04
Pb	-	-	-	11.4	11.8	6.4	-	-	9.1	-	-	-	-	-
Th	12.79	-	-	9.10	11.70	11.80	-	-	19.40	-	9.19	3.38	13.03	8.12
U	3.29	-	-	2.51	4.40	5.90	-	-	3.31	-	2.40	0.84	2.69	1.88
$^{87}\text{Sr}/^{86}\text{Sr}_{\text{meas}}$	0.70486			0.704688	0.70473	0.705496			0.70559		0.705576	0.704443	0.704936	0.704865
($\pm 2s$)	(10)			(10)	(13)	(13)			(11)		(9)	(10)	(11)	(10)
$^{87}\text{Rb}/^{86}\text{Sr}$	0.861323			0.691771	0.939052	0.938941			1.513117		0.892198	0.507589	0.754601	0.854483
$^{87}\text{Sr}/^{86}\text{Sr}_t$	0.704685			0.704547	0.704538	0.705304			0.705281		0.705394	0.704339	0.704782	0.704690
$^{143}\text{Nd}/^{144}\text{Nd}_{\text{meas.}}(\pm 2s)$	0.51271			0.512696	0.512686	0.512605			0.512609		0.512592	0.512725	0.512693	0.512701
(9)	(9)			(5)	(9)	(9)			(6)		(10)	(10)	(9)	(10)
$^{147}\text{Sm}/^{144}\text{Nd}$	0.116551			0.119120	0.111507	0.125234			0.113534		0.114883	0.129839	0.111964	0.114886
$^{143}\text{Nd}/^{144}\text{Nd}_t$	0.512699			0.512685	0.512675	0.512593			0.512598		0.512581	0.512713	0.512682	0.512690
eps Nd	1.55			1.27	1.09	-0.52			-0.42		-0.75	1.82	1.23	1.38

(1): analysed by XRF

Table DR2 - Major and trace elements analyses of Almagro rocks. Analytical details in Appendix.

sample member	TS 217	TS 11	TS 14	TS 18	N-32	N-34	TA-415	N-52	TA-408	N-66 B	N-62	F-9	N-60
	Puerta Tástil	Las Cuevas	Lampoazar	Almagro A	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B
latitude S	24°31'18"	24°29'33"	24°32'54"	24°32'50"	24°24'27"	24°24'27"	24° 22' 51"	24°24'27"	24° 22' 51"	24°24'27"	24°24'27"	24°24'27"	24°24'27"
longitude W	65°45'58"	65°53'30"	65°50'47"	65°50'31"	65°52'29"	65°52'29"	65° 51' 32"	65°52'29"	65° 51' 32"	65°52'29"	65°52'29"	65°52'29"	65°52'29"
SiO ₂ (wt%)	60.47	59.84	56.47	61.36	53.17	54.21	57.30	57.89	57.92	57.97	58.05	58.09	58.46
TiO ₂	0.76	0.78	1.04	0.67	1.14	1.07	0.95	0.98	0.97	0.95	0.96	0.81	0.98
Al ₂ O ₃	15.30	16.85	17.11	16.05	15.02	14.84	16.36	17.26	16.45	16.46	16.68	16.35	16.41
Fe ₂ O ₃	6.79	6.17	7.47	5.35	9.24	8.71	7.43	7.17	7.34	7.36	7.46	6.52	7.22
MnO	0.12	0.12	0.15	0.12	0.14	0.14	0.12	0.23	0.12	0.13	0.11	0.12	0.13
MgO	1.93	2.77	3.66	2.62	5.99	6.78	3.45	3.34	3.44	3.35	3.14	2.57	3.54
CaO	7.03	5.32	6.81	5.87	8.01	7.37	6.10	6.36	6.08	6.17	5.99	5.37	6.03
Na ₂ O	3.12	3.31	3.00	3.70	2.57	2.67	2.73	2.58	2.81	2.87	2.91	3.11	3.10
K ₂ O	3.45	2.65	2.82	2.43	2.55	2.67	3.33	3.40	3.31	3.32	3.18	3.34	3.27
P ₂ O ₅	0.34	0.29	0.36	0.23	0.37	0.34	0.30	0.31	0.31	0.32	0.32	0.37	0.38
L.O.I.	1.41	1.92	1.23	1.09	1.39	0.09	0.76	1.20	0.43	0.97	0.67	1.36	0.75
Be (ppm)	2.17	2.40	2.23	1.85	1.74	1.86	-	2.14	-	-	2.14	-	-

Sc	12	14	22	15	23	23	-	17	-	-	18	-	-
V	95	120	198	123	222	208	-	159	-	-	171	-	-
Cr	85	34	27	114	309	330	-	27	-	-	59	-	-
Co	15	15	20	17	60	58	-	57	-	-	43	-	-
Ni	25	15	13	24	58	65	-	12	-	-	14	-	-
Cu	27	18	30	14	37	34	-	15	-	-	20	-	-
Rb	142	134	102	88	88	97	-	124	-	-	123	-	-
Sr	524	469	575	547	530	512	-	465	-	-	492	-	-
Y	22.9	24.7	29.4	17.9	25.8	24.9	-	25.4	-	-	30.0	-	-
Zr	77	187	182	102	147	145	-	174	-	-	180	-	-
Nb	29.9	19.6	22.6	13.2	20.5	20.4	-	17.9	-	-	20.7	-	-
Cs	4.57	6.27	4.28	2.15	4.18	4.40	-	5.44	-	-	4.52	-	-
Ba	380	507	573	454	565	519	-	590	-	-	613	-	-
La	32.4	36.8	35.7	24.9	33.1	32.9	-	36.1	-	-	39.7	-	-
Ce	61.3	70.9	69.2	49.2	64.5	65.5	-	72.1	-	-	70.6	-	-
Pr	7.1	8.3	8.1	5.9	7.9	7.9	-	8.6	-	-	9.3	-	-
Nd	26.6	30.4	30.9	22.2	30.9	30.7	-	32.6	-	-	35.0	-	-
Sm	5.1	5.9	6.0	4.4	6.2	6.2	-	6.4	-	-	6.9	-	-
Eu	1.31	1.28	1.39	1.05	1.57	1.48	-	1.41	-	-	1.62	-	-
Gd	4.5	5.0	5.7	3.8	5.4	5.3	-	5.6	-	-	6.1	-	-
Tb	0.70	0.77	0.85	0.57	0.83	0.80	-	0.81	-	-	0.93	-	-
Dy	3.8	4.3	5.0	3.1	4.5	4.5	-	4.5	-	-	5.2	-	-
Ho	0.78	0.83	0.99	0.62	0.89	0.88	-	0.87	-	-	1.03	-	-
Er	2.18	2.29	2.76	1.69	2.39	2.33	-	2.22	-	-	2.72	-	-
Tm	0.31	0.35	0.42	0.25	0.34	0.33	-	0.33	-	-	0.40	-	-
Yb	2.10	2.20	2.60	1.55	2.14	2.15	-	2.05	-	-	2.53	-	-
Lu	0.30	0.31	0.37	0.21	0.29	0.29	-	0.29	-	-	0.35	-	-
Hf	2.32	4.86	4.59	2.99	3.99	3.98	-	4.58	-	-	4.81	-	-
Ta	2.26	1.46	1.44	0.92	1.30	1.33	-	1.29	-	-	1.38	-	-
Tl	0.11	0.70	0.61	0.25	0.33	0.21	-	0.66	-	-	0.53	-	-
Pb	9.9	14.1	11.2	7.7	12.7	10.8	-	12.6	-	-	13.6	-	-
Th	11.22	12.05	9.21	6.40	8.41	8.91	-	11.16	-	-	10.45	-	-
U	2.36	2.69	2.34	1.76	1.88	1.95	-	2.22	-	-	2.27	-	-
$^{87}\text{Sr}/^{86}\text{Sr}_{\text{meas.}}$	0.705233	0.708509			0.706788	0.706913		0.708592					
($\pm 2\text{s}$)	(12)	(11)			(11)	(12)		(12)					
$^{87}\text{Rb}/^{86}\text{Sr}$	0.715031	0.825638			0.479462	0.546708		0.769797					
$^{87}\text{Sr}/^{86}\text{Sr}_i$	0.705103	0.708380			0.706738	0.706856		0.708512					
$^{143}\text{Nd}/^{144}\text{Nd}_{\text{meas.}}$	0.512646	0.512374			0.512439	0.512424		0.512298					
($\pm 2\text{s}$)	(10)	(11)			(11)	(10)		(11)					
$^{147}\text{Sm}/^{144}\text{Nd}$	0.116642	0.117550			0.120929	0.121864		0.118627					
$^{143}\text{Nd}/^{144}\text{Nd}_t$	0.512636	0.512366			0.512433	0.512418		0.512292					
eps Nd	0.29	-5.04			-3.81	-4.10		-6.55					

(DR2 - continued)

sample member	TAL-21	N-55	TS 216	TA-412	N-45	N-29	N-14	TA-406	TA-414	TA-403	TA-210	A-4
Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro B	Almagro C	Almagro C
latitude S	24°22'54"	24°24'27"	24°30'16"	24 22 51	24°24'27"	24°24'27"	24°24'27"	24 22 51	24 22 51	24° 22' 51"	24°18'17"	24°16'56"
longitude W	65°51'34"	65°52'29"	65°48'31"	65 51 32	65°52'29"	65°52'29"	65°52'29"	65 51 32	65 51 32	65° 51' 32"	65°53'07"	65°50'58"
SiO ₂ (wt%)	58.76	59.21	59.41	59.54	60.10	60.33	60.45	60.94	61.10	61.84	55.02	56.42
TiO ₂	0.98	0.81	0.78	0.84	0.81	0.75	0.83	0.77	0.77	0.76	1.28	1.01
Al ₂ O ₃	16.86	16.71	16.23	15.95	16.07	16.22	16.18	15.79	16.46	16.62	15.80	15.61
Fe ₂ O ₃	6.76	6.34	6.16	6.39	6.17	5.70	6.34	5.93	5.92	5.83	9.60	7.60
MnO	0.11	0.13	0.11	0.12	0.11	0.11	0.12	0.11	0.11	0.11	0.15	0.13
MgO	2.97	2.90	2.89	3.14	2.87	2.68	2.96	2.77	2.49	2.67	4.71	3.73
CaO	5.93	5.59	5.28	5.28	5.47	4.81	5.36	5.16	5.12	5.02	6.57	6.01
Na ₂ O	2.55	3.09	2.79	3.18	3.15	3.04	3.23	3.02	3.17	2.93	2.66	2.58
K ₂ O	3.27	3.30	3.78	3.45	3.25	3.52	3.34	3.46	3.57	3.69	2.70	3.09
P ₂ O ₅	0.30	0.37	0.32	0.31	0.33	0.32	0.33	0.30	0.30	0.31	0.36	0.30
L.O.I.	1.37	0.70	1.52	0.38	1.40	1.96	0.84	0.70	1.09	1.61	0.28	2.23
Be (ppm)	2.15	2.48	2.77	-	2.90	-	-	-	-	2.85	1.67	-
Sc	20	14	15	-	14	-	-	-	-	12	24	-
V	166	118	133	-	127	-	-	-	-	108	225	-
Cr	50	41	38	-	95	-	-	-	-	50	52	-
Co	17	60	16	-	50	-	-	-	-	13	29	-
Ni	15	14	15	-	49	-	-	-	-	15	32	-
Cu	27	18	28	-	29	-	-	-	-	21	50	-
Rb	122	128	162	-	133	-	-	-	-	138	91	-
Sr	429	613	502	-	567	-	-	-	-	543	429	-
Y	29.2	24.1	23.8	-	25.2	-	-	-	-	22.9	30.4	-
Zr	172	201	199	-	161	-	-	-	-	193	169	-
Nb	17.4	27.9	24.3	-	24.2	-	-	-	-	24.0	19.4	-
Cs	7.80	5.92	10.15	-	5.65	-	-	-	-	8.10	3.24	-
Ba	664	665	593	-	762	-	-	-	-	624	425	-
La	36.0	48.0	42.0	-	41.5	-	-	-	-	42.0	29.3	-
Ce	72.0	89.7	79.9	-	75.6	-	-	-	-	78.0	61.0	-
Pr	8.8	10.0	9.0	-	8.9	-	-	-	-	9.1	7.5	-
Nd	34.0	36.1	32.5	-	32.8	-	-	-	-	34.0	30.0	-
Sm	6.8	6.3	5.9	-	6.2	-	-	-	-	6.2	6.5	-
Eu	1.50	1.49	1.37	-	1.36	-	-	-	-	1.47	1.59	-
Gd	5.8	5.2	5.1	-	5.4	-	-	-	-	5.0	6.1	-
Tb	0.91	0.78	0.76	-	0.77	-	-	-	-	0.76	0.95	-

Dy	5.1	4.2	4.2	-	4.3	-	-	-	-	4.1	5.5	-
Ho	1.02	0.80	0.83	-	0.82	-	-	-	-	0.80	1.09	-
Er	2.78	2.23	2.23	-	2.18	-	-	-	-	2.12	2.89	-
Tm	0.43	0.33	0.33	-	0.32	-	-	-	-	0.30	0.43	-
Yb	2.49	2.11	2.09	-	1.93	-	-	-	-	1.93	2.65	-
Lu	0.35	0.31	0.29	-	0.28	-	-	-	-	0.28	0.38	-
Hf	4.70	5.11	5.19	-	4.26	-	-	-	-	5.20	4.49	-
Ta	1.20	1.77	1.64	-	1.63	-	-	-	-	1.67	1.21	-
Tl	0.83	0.68	0.77	-	0.80	-	-	-	-	0.96	0.56	-
Pb	12.2	16.0	17.1	-	18.7	-	-	-	-	16.2	n.d.	-
Th	10.50	13.30	15.04	-	11.03	-	-	-	-	12.80	7.39	-
U	2.32	2.70	3.72	-	2.62	-	-	-	-	3.06	1.71	-
$^{87}\text{Sr}/^{86}\text{Sr}_{\text{meas.}}$										0.707683	0.707965	
($\pm 2\text{s}$)										(12)	(10)	
$^{87}\text{Rb}/^{86}\text{Sr}$										0.758491	0.614001	
$^{87}\text{Sr}/^{86}\text{Sr}_t$										0.707604	0.707904	
$^{143}\text{Nd}/^{144}\text{Nd}_{\text{meas.}}$										0.51242	0.512425	
($\pm 2\text{s}$)										(11)	(12)	
$^{147}\text{Sm}/^{144}\text{Nd}$										0.118627	0.131284	
$^{143}\text{Nd}/^{144}\text{Nd}_t$										0.512292	0.512419	
eps Nd										-6.56	-4.10	

(DR2 - continued)

sample member	TA-213	TA-211	TA-202	A-29a	A-38	A-31	TA-111	TA-112	TA-116	TA-203	A-35	A-30	TA-113
Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C	Almagro C
latitude S	24 18 10	24 18 10	24° 16' 56"	24°20'22"	24 20 21	24°20'24"	24°21'15"	24°21'15"	24°21'07"	24 16 56	24 16 56	24°20'24"	24°21'15"
longitude W	65 53 03	65 53 03	65° 50' 58"	65°52'29"	65 52 36	65°52'28"	65°52'06"	65°52'06"	65°51'35"	65 50 58	65 50 58	65°52'59"	65°52'06"
SiO ₂ (wt%)	56.63	57.32	58.15	58.24	58.58	60.91	61.15	61.20	61.44	61.96	65.93	65.97	66.03
TiO ₂	1.27	1.09	1.11	0.73	0.75	0.67	0.60	0.67	0.68	0.62	0.41	0.41	0.42
Al ₂ O ₃	15.51	17.21	16.11	18.12	15.69	17.79	17.72	17.62	18.25	16.48	16.74	16.79	16.76
Fe ₂ O ₃	9.36	8.14	8.03	6.22	5.40	5.57	4.68	5.38	5.59	4.80	3.26	3.24	3.33
MnO	0.15	0.15	0.13	0.18	0.17	0.11	0.09	0.11	0.11	0.11	0.10	0.10	0.10
MgO	4.46	3.04	3.22	1.22	2.62	1.65	1.15	1.33	2.00	1.72	1.00	0.94	1.02
CaO	5.86	6.15	5.48	6.18	5.37	4.96	4.38	4.49	4.84	4.13	3.03	3.09	3.07
Na ₂ O	2.58	3.12	2.73	3.43	3.17	3.22	3.29	3.31	3.33	3.30	3.75	3.70	3.75
K ₂ O	2.75	2.84	3.08	2.66	3.64	3.43	3.64	3.48	3.47	3.42	4.02	4.00	4.02
P ₂ O ₅	0.33	0.36	0.32	0.36	0.29	0.36	0.33	0.34	0.38	0.23	0.18	0.20	0.19
L.O.I.	0.70	-0.18	1.25	1.87	2.93	1.29	0.94	1.00	0.74	1.99	0.60	0.34	0.23

Be (ppm)	-	-	2.35	-	-	2.70	2.95	-	-	-	-	3.21	-
Sc	-	-	19	-	-	8	7	-	-	-	-	5	-
V	-	-	175	-	-	59	42	-	-	-	-	9	-
Cr	-	-	35	-	-	5	5	-	-	-	-	12	-
Co	-	-	21	-	-	9	6	-	-	-	-	1	-
Ni	-	-	23	-	-	4	3	-	-	-	-	1	-
Cu	-	-	39	-	-	12	8	-	-	-	-	2	-
Rb	-	-	106	-	-	131	145	-	-	-	-	164	-
Sr	-	-	405	-	-	538	550	-	-	-	-	455	-
Y	-	-	28.9	-	-	23.7	24.6	-	-	-	-	23.2	-
Zr	-	-	177	-	-	302	371	-	-	-	-	399	-
Nb	-	-	19.0	-	-	22.8	23.9	-	-	-	-	26.4	-
Cs	-	-	4.30	-	-	5.10	7.00	-	-	-	-	9.10	-
Ba	-	-	472	-	-	652	999	-	-	-	-	680	-
La	-	-	32.0	-	-	40.0	42.0	-	-	-	-	45.0	-
Ce	-	-	65.0	-	-	75.0	79.0	-	-	-	-	85.0	-
Pr	-	-	8.1	-	-	8.8	9.2	-	-	-	-	9.5	-
Nd	-	-	31.7	-	-	32.3	34.0	-	-	-	-	34.0	-
Sm	-	-	6.7	-	-	5.9	6.0	-	-	-	-	6.1	-
Eu	-	-	1.60	-	-	1.40	1.37	-	-	-	-	1.30	-
Gd	-	-	5.7	-	-	4.9	4.8	-	-	-	-	4.7	-
Tb	-	-	0.92	-	-	0.74	0.72	-	-	-	-	0.71	-
Dy	-	-	5.2	-	-	4.0	4.1	-	-	-	-	3.9	-
Ho	-	-	1.03	-	-	0.82	0.82	-	-	-	-	0.77	-
Er	-	-	2.75	-	-	2.21	2.25	-	-	-	-	2.19	-
Tm	-	-	0.40	-	-	0.33	0.37	-	-	-	-	0.34	-
Yb	-	-	2.51	-	-	2.17	2.27	-	-	-	-	2.24	-
Lu	-	-	0.36	-	-	0.32	0.36	-	-	-	-	0.33	-
Hf	-	-	4.70	-	-	7.00	8.40	-	-	-	-	9.20	-
Ta	-	-	1.29	-	-	1.49	1.58	-	-	-	-	1.84	-
Tl	-	-	0.75	-	-	0.77	0.88	-	-	-	-	1.21	-
Pb	-	-	13.3	-	-	13.7	14.3	-	-	-	-	17.3	-
Th	-	-	8.50	-	-	10.00	11.60	-	-	-	-	13.80	-
U	-	-	1.98	-	-	2.36	2.83	-	-	-	-	3.50	-
$^{87}\text{Sr}/^{86}\text{Sr}_{\text{meas.}}$			0.708807			0.708319	0.708419					0.708529	
($\pm 2s$)			(10)			(13)	(12)					(11)	
$^{87}\text{Rb}/^{86}\text{Sr}$			0.787905			0.738875	0.774961					1.068575	
$^{87}\text{Sr}/^{86}\text{Sr}_t$			0.708729			0.708252	0.708345					0.708427	
$^{143}\text{Nd}/^{144}\text{Nd}_{\text{meas.}}$			0.512366			0.512397	0.512389					0.512383	
($\pm 2s$)			(7)			(9)	(7)					(7)	
$^{147}\text{Sm}/^{144}\text{Nd}$			0.127327			0.111085	0.108945					0.107496	
$^{143}\text{Nd}/^{144}\text{Nd}_t$			0.512360			0.512392	0.512384					0.512378	
eps Nd			-5.24			-4.63	-4.78					-4.90	

DR3 - Representative analyses of the main mineral phases in the Las Burras and Almagro rocks. Analytical details in Appendix.

provenance	Las Burras	Las Burras	Las Burras	Las Burras	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro			
mineral sample composition	K-FELDSPAR				PLAGIOCLASE A37 monzodioritic				PLAGIOCLASE N34 basaltic dark bands				N34 basaltic light bands		TA202 andesitic	A31 andesitic		A30 dacitic
					core	interm.	rim	core	interm.	rim	core	rim	core	rim	core	rim	core	rim
SiO ₂ wt%	64.74	64.91	53.46	64.36	52.01	49.57	49.82	47.91	52.2	50.13	47.39	51.32	55.93	53.2	57.2			
Al ₂ O ₃	19.19	19.29	29.76	22.45	29.03	31.62	31.25	32.8	29.75	30.9	33.15	30.65	27.72	29.57	27.69			
FeO	0.07	0.11	0.28	0.20	1.38	0.78	0.88	0.76	0.75	0.89	0.55	0.54	0.37	0.35	0.23			
CaO	0.18	0.36	11.38	5.12	11.93	14.33	14.26	15.67	12.87	14.08	16.59	13.82	10.05	11.65	9.43			
Na ₂ O	2.39	2.92	4.90	7.65	3.3	3.18	3.12	2.5	4.02	3.58	2.03	3.4	5.51	4.45	5.83			
K ₂ O	13.42	12.40	0.22	0.22	1.95	0.37	0.4	0.25	0.41	0.32	0.1	0.21	0.35	0.33	0.4			
An	0.88	1.76	55.49	26.63	58.99	69.82	69.96	76.47	62.38	67.24	81.39	68.34	49.17	57.97	46.10			
Ab	21.11	25.89	43.24	72.01	29.53	28.04	27.70	22.08	35.26	30.94	18.02	30.42	48.79	40.07	51.57			
Or	78.01	72.34	1.28	1.36	11.48	2.15	2.34	1.45	2.37	1.82	0.58	1.24	2.04	1.96	2.33			
provenance	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Almagro	Las Burras	Las Burras	Almagro	Almagro	Almagro	Almagro	Almagro			
mineral sample composition	CLINOPYROXENE N32 basaltic dark bands				ORTHOPYROXENE TA202 andesitic				A31 andesitic		AMPHIBOLE A37 monzodioritic		AMPHIBOLE TA202 andesitic		BIOTITE A30 dacitic			
	core	rim	core	rim	core	rim	core	rim	core	rim	core	rim	core	rim	core	core		
SiO ₂	50.91	51.51	51.07	49.39	51.86	53.72	52.68	53.32	46.07	49.5	40.84	40.85	37.64	37.33				
TiO ₂	0.64	0.49	0.36	0.89	0.29	0.18	0.1	0.14	1.47	0.99	3.16	2.75	4.18	4.11				
Al ₂ O ₃	2.75	3.23	2.76	4.65	3.48	0.99	1.45	2.39	7.99	5.37	13.8	13.68	16.05	15.88				
FeO	10.86	5.86	10.52	9.31	18.22	17.53	20.38	19.38	15.16	12.6	13.45	14.34	15.01	14.59				
MnO	0.45	0.22	0.52	0.34	0.33	0.75	0.78	0.59	0.72	0.68	0.21	0.23	0.28	0.2				
MgO	13.58	16.36	13.44	14.63	24.58	26.68	23.58	24.66	12.98	14.99	12.8	12.35	14.87	14.88				
CaO	20.22	21.08	20.55	20.24	1.28	1.06	0.58	0.8	11.66	11.85	11.13	11.29	0.09	0.05				
Na ₂ O	0.43	0.38	0.62	0.4	0.09	bdl	0.04	0	1.42	1.1	1.98	2.12	0.61	0.54				
K ₂ O	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.88	0.51	1.2	1.17	8.26	8.44				
Cr ₂ O ₃	0.05	0.71	0.14	0.15	bdl	0.05	0	0	bdl	bdl	0.02	0.01	0.09	bdl				
Wo	42.48	43.54	43.30	42.29	2.58	2.04	1.18	1.59										
En	39.71	47.02	39.40	42.53	68.81	71.58	66.56	68.30										
Fs	17.81	9.45	17.30	15.18	28.61	26.38	32.27	30.11										
Mg#	69.03	83.27	69.49	73.70	70.63	73.07	67.35	69.41	60.41	67.95	62.91	60.55	63.84	64.51				

provenance	Almagro	Almagro		Almagro	Almagro	Almagro	Almagro
mineral sample	OLIVINE N32	N32	mineral sample	Fe-Ti OXIDES N33		Cr, Al-SPINEL N34	
composition	basaltic with rim in equil.	basaltic with iddings. rim		Magnetite	Ilmenite	small grains in Fo86 in Fo83	
			SiO ₂	0.43	0.86	bdl	bdl
			TiO ₂	14.05	46.88	0.61	1.63
SiO ₂ wt%	38.18	40.54	Al ₂ O ₃	3.9	2.35	15.46	18.26
FeO	22.45	12.44	FeO _{tot}	77.72	45.7	34.02	43.49
MnO	0.34	0.3	MnO	0.47	1.05	bdl	bdl
MgO	38.87	46.54	MgO	2.94	2.95	8.65	8.5
CaO	0.16	0.14	Cr ₂ O ₃	0.49	0.21	41.26	28.11
Cr ₂ O ₃	bdl	0.04	%mol	0.42			
			Usp				
NiO	bdl	bdl	%mol		0.90		
			Ilm				
			Mg/Fe+Mg			0.31	0.26
Fo	75.3	86.7	Cr/Cr+Al			0.64	0.51