

Appendix IV. Trace element ICP-MS analyses of selected sanidines and glasses

Area	Yellowstone				Thomas Range			Long Valley			Taylor Creek			Jemez Mtn	
Unit	Nez Perce Creek	Upper Basin member	Dry Creek	Mount Jackson	Topaz Mtn	Topaz Mtn	Spor Mtn	Glass Creek	Deer Mtn	Punch Bowl	Boiler Peak	TC	TC	BM 8407	Las Conchas Campground
	Qpcn	Qpu	Qpcd	Qmj				Cp		Qmrm	SMC	BLP	DGC	Qvvf	Qvvf
# of Sample	98821	98822	98823	98825	98701	98702	98703	98711	98713	98717	98911	98912	98913	93908B	98901
Sanidine															
Rb	78.4	149.0	101.0	213.0	444.0	540.0	837.0	122.0	126.0	140.0	223.0	347.0	238.0	174.0	188.0
Sr	78.3	324.0	167.0	8.5	59.0	29.5	3.0	666.0	516.0	56.0	15.8	7.7	10.9	89.1	91.8
Ba	2640.0	10000.0	5360.0	182.0	160.0	67.5	3.5	6990.0	4890.0	391.0	89.5	43.5	53.5	703.0	758.0
Y	0.5	1.5	1.0	1.0	1.5	1.0	6.0	<0.5	<0.5	0.5	17.0	2.5	1.5	0.5	0.5
Zr	6.0	11.5	5.5	18.0	19.0	24.0	13.5	3.0	2.5	7.0	18.5	12.5	9.0	1.5	9.5
Nb	1.0	3.0	1.0	5.0	3.0	7.0	9.0	3.0	1.0	1.0	5.0	3.0	3.0	1.0	2.0
Th	<1.0	<1.0	<1.0	2.0	2.0	3.0	4.0	<1.0	<1.0	<1.0	3.0	1.0	1.0	<1.0	<1.0
Cs	<0.1	0.2	<0.1	0.4	1.5	1.9	2.4	0.3	0.1	0.5	0.4	0.7	0.3	0.2	0.2
Hf	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ta	<0.5	1.0	<0.5	0.5	0.5	0.5	1.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	1.0
U	<0.5	<0.5	<0.5	1.0	1.0	1.0	2.0	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Co	<0.5	<0.5	<0.5	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
W	6.0	2.0	3.0	4.0	3.0	6.0	63.0	3.0	1.0	1.0	4.0	10.0	62.0	28.0	70.0
La	9.5	11.5	12.0	5.5	6.0	3.0	9.0	0.5	1.0	<0.5	5.5	3.5	3.5	0.5	2.0
Ce	10.5	11.0	13.5	6.0	5.0	5.0	12.5	1.0	1.0	0.5	18.5	10.5	8.5	1.5	2.5
Pr	0.6	0.7	0.9	0.3	0.3	0.1	1.0	<0.1	<0.1	<0.1	0.8	0.2	0.3	<0.1	0.1
Nd	1.5	1.5	2.5	1.0	<0.5	<0.5	3.0	<0.5	<0.5	<0.5	3.0	0.5	0.5	<0.5	<0.5
Sm	0.1	0.2	0.4	0.1	<0.1	<0.1	0.7	<0.1	<0.1	<0.1	0.9	0.2	0.2	<0.1	0.1
Eu	4.4	5.0	4.6	0.7	0.7	0.4	<0.1	1.2	1.0	0.8	0.8	0.6	0.6	0.5	0.6
Gd	0.3	0.2	0.3	0.1	<0.1	0.1	0.7	<0.1	<0.1	<0.1	1.3	0.3	0.3	<0.1	0.1
Tb	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1
Dy	0.1	0.3	<0.1	0.1	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	2.2	0.3	0.3	<0.1	0.1
Ho	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1	<0.1
Er	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	1.6	0.1	0.2	<0.1	<0.1
Tm	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1
Yb	0.1	0.3	<0.1	0.1	0.1	0.2	0.7	<0.1	<0.1	<0.1	2.1	0.3	0.1	0.1	0.1
Lu	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1

Appendix IV. Trace element ICP-MS analyses of selected sanidines and glasses (continued)

Area	Yellowstone				Thomas Range			Long Valley			Taylor Creek			Jemez Mtn	
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	Qpcn	Qpu	Qpcd	Qmj				Cp		Qmrm	SMC	BLP	DGC	Qvvf	Qvvf
# of Sample	98821	98822	98823	98825	98701	98702	98703	98711	98713	98717	98911	98912	98913	93908B	98901
Glass															
Rb	234.0	222.0	232.0	354.0	413.0	464.0	2170.0	161.0	159.0	213.0	454.0	459.0	475.0		297.0
Sr	4.2	35.2	7.9	1.1	15.1	15.8	11.2	148.0	172.0	3.9	4.1	2.7	2.9		9.8
Ba	110.5	534.0	151.0	9.5	27.0	19.0	<0.5	344.0	374.0	5.5	11.0	16.5	12.0		48.0
Y	79.5	30.5	69.0	64.0	38.5	41.5	67.5	14.5	16.0	27.0	88.5	21.0	29.0		68.5
Zr	265.0	175.5	211.0	142.5	130.0	118.5	79.0	117.0	154.0	99.5	165.5	159.0	134.0		93.5
Nb	55.0	5.2	49.0	67.0	70.0	63.0	158.0	15.0	17.0	21.0	45.0	51.0	46.0		74.0
Th	23.0	14.0	24.0	22.0	55.0	58.0	39.0	12.0	13.0	17.0	32.0	33.0	26.0		32.0
Cs	3.7	2.6	4.0	3.1	7.6	7.9	71.6	3.9	3.9	5.3	4.9	4.1	6.2		8.7
Hf	10.0	7.0	8.0	8.0	6.0	6.0	7.0	4.0	5.0	4.0	9.0	9.0	8.0		5.0
Ta	5.0	4.0	4.5	7.5	7.0	6.5	59.0	2.0	3.0	2.5	6.0	6.5	5.5		9.0
U	6.5	5.5	6.5	8.5	11.5	16.5	16.0	5.0	5.0	6.5	8.0	6.0	6.0		11.5
Co	<0.5	0.5	<0.5	<0.5	<0.5	0.5	<0.5	1.0	0.5	<0.5	30.5	0.5	0.5		<0.5
W	5.0	1.0	3.0	4.0	5.0	5.0	38.0	3.0	2.0	2.0	256.0	8.0	5.0		18.0
La	91.5	38.0	83.5	33.5	48.0	42.0	34.5	24.0	30.0	16.0	48.5	13.5	13.0		26.5
Ce	181.0	56.0	164.5	64.5	93.5	84.0	113.0	48.5	44.5	38.5	100.0	74.0	67.5		62.5
Pr	19.3	5.2	16.7	7.2	8.5	8.0	11.1	4.7	4.4	4.2	12.2	2.6	2.0		6.8
Nd	70.5	17.5	58.0	25.0	24.0	23.0	36.5	15.5	14.5	16.0	43.5	8.5	6.0		25.0
Sm	13.3	4.0	11.5	7.1	4.1	3.7	9.3	2.7	2.9	3.7	10.3	2.1	1.8		6.4
Eu	0.7	0.9	0.7	0.1	0.2	0.1	<0.1	0.5	0.5	0.1	0.2	0.1	0.1		0.1
Gd	14.7	4.1	12.0	8.0	4.1	4.0	8.9	2.3	2.4	4.3	10.3	2.2	2.4		7.4
Tb	2.3	0.8	1.9	1.4	0.8	0.7	1.6	0.4	0.4	0.7	2.0	0.5	0.6		1.5
Dy	12.7	4.4	11.0	9.2	4.4	4.4	10.1	2.0	2.3	4.2	13.4	3.2	4.2		9.8
Ho	2.5	0.9	2.4	2.1	1.1	1.1	2.0	0.4	0.5	0.8	3.0	0.7	1.0		2.0
Er	7.6	3.0	6.6	6.3	3.7	3.9	6.8	1.3	1.5	2.5	9.4	2.5	3.6		6.5
Tm	1.1	0.5	1.0	1.0	0.7	0.7	1.3	0.2	0.3	0.4	1.6	0.5	0.6		1.2
Yb	6.3	3.2	6.3	6.4	0.1	5.9	10.9	1.7	1.7	2.4	11.1	3.2	4.6		7.4
Lu	1.1	0.5	0.9	0.9	0.9	0.9	1.7	0.2	0.3	0.4	1.6	0.5	0.7		1.1