



Group 4A - Whole Rock Analysis for Major Oxides and Minor Elements

Element	Detection Limit	Unit	Official Values			Certified Reference Materials			
			STD SO-18 Official Value	SO-18 Upper Limit	SO-18 Lower Limit	CRM SY-4	CRM AGV-2	CRM GSP-2	CRM W-2
SiO₂	0.04	%	58.47	60.22	56.72	49.90	59.30	66.60	52.68
Al₂O₃	0.03	%	14.23	14.66	13.80	20.69	16.91	14.90	15.45
Fe₂O₃	0.04	%	7.67	7.90	7.44	6.21	6.69	4.90	10.83
MgO	0.01	%	3.35	3.45	3.25	0.54	1.79	0.96	6.37
CaO	0.01	%	6.42	6.61	6.23	8.05	5.20	2.10	10.86
Na₂O	0.01	%	3.71	3.82	3.60	7.10	4.19	2.78	2.20
K₂O	0.04	%	2.17	2.28	2.06	1.66	2.88	5.38	0.63
TiO₂	0.01	%	0.69	0.73	0.65	0.29	1.05	0.66	1.06
P₂O₅	0.01	%	0.83	0.87	0.79	0.13	0.48	0.29	0.14
MnO	0.01	%	0.39	0.42	0.36	0.11			0.17
Cr₂O₃	0.001	%	0.550	0.567	0.534	0.002		0.002	0.014
Ba	5	ppm	515	541	489	340	1140	1340	170
Ni	30	ppm	44	52	20	9	19	17	70
Sr	10	ppm	402	442	362	1191	658	240	190
Zr	10	ppm	280	308	252	517	230	550	100
Y	10	ppm	33	35	25	119	20	28	23
Sc	1	ppm	25	28	20	1	13	6	36
LOI	0.1	%	1.9	2.1	1.7	4.6			
Ce	20	ppm	27	40	<20	122	68	420	23
Co	20	ppm	26	40	<20	3	16	7	43
Cu	20	ppm	66	73	59	7	53	43	110
Nb	20	ppm	21	40	<20	13	15	27	8
Ta	20	ppm	<20			1	1		1
Zn	20	ppm	40	48	32	93	86	115	80
C*	0.01	%	2.40	2.52	2.28				
S*	0.01	%	5.30	5.58	5.02				

* Standard STD CSB for carbon and sulphur

April 19, 2005

Revised June 2005 -Zr & July 20, 2005 - Sc



Quality Control Report

Group 4B - Geochemical Analysis for Whole Rock Trace Elements

			Sample Standards Official Values			Certified Reference Materials*			
Element	Detection Limit	Unit	STD SO-18 Official Value	SO-18 Upper Limit	SO-18 Lower Limit	CRM SY-4	CRM AGV-2	CRM GSP-2	CRM W-2
Ba	0.5	ppm	514.0	565.4	462.6	340.0	1140.0	1340.0	170.0
Be	1	ppm	1.0	3.0	<1	2.6	2.3	1.5	1.3
Co	0.5	ppm	26.2	28.8	23.6	2.8	16.0	7.4	43.0
Cs	0.1	ppm	7.1	7.9	6.3	1.5	1.2	1.2	1.0
Ga	0.5	ppm	17.6	19.4	15.8	35.0	20.0	22.0	17.0
Hf	0.5	ppm	9.8	10.8	8.8	10.6	5.1	14.1	2.6
Nb	0.5	ppm	20.9	23.0	18.8	13.0	15.0	27.0	7.9
Rb	0.5	ppm	28.7	31.6	25.8	55.0	68.6	245.0	21.0
Sn	1	ppm	15	20.0	12.0	7	2	-	-
Sr	0.5	ppm	407.4	448.1	366.7	1191	658	240	190
Ta	0.1	ppm	7.4	8.1	6.7	0.9	0.9	-	0.5
Th	0.1	ppm	9.9	10.9	8.9	1.4	6.1	104.0	2.4
U	0.1	ppm	16.4	18.0	14.8	0.8	1.9	2.4	0.5
V	5	ppm	200	220	180	8	120	52	260
W	0.1	ppm	15.1	17.4	12.8	-		-	-
Zr	0.5	ppm	280.0	308.0	252.0	517	230	550	100
Y	0.1	ppm	33.0	36.3	29.7	119.0	20.0	28.0	23.0
La	0.5	ppm	12.3	14.1	10.5	58.0	38.0	180.0	10.0
Ce	0.5	ppm	27.1	29.8	24.4	122.0	68.0	420.0	23.0
Pr	0.02	ppm	3.45	3.8	3.1	15.0	8.3	52.0	-
Nd	0.4	ppm	14.0	15.4	12.6	57.0	30.0	200.0	13.0
Sm	0.1	ppm	3.0	3.4	2.6	12.7	5.7	27.0	3.3
Eu	0.05	ppm	0.89	0.98	0.80	2.00	1.54	2.30	1.00
Gd	0.05	ppm	2.93	3.22	2.64	14.00	4.69	12.00	-
Tb	0.01	ppm	0.53	0.58	0.48	2.60	0.64	-	0.63
Dy	0.05	ppm	3.00	3.30	2.70	18.20	3.60	6.10	3.60
Ho	0.05	ppm	0.62	0.68	0.56	4.30	0.71	1.00	0.76
Er	0.05	ppm	1.84	2.02	1.66	14.20	1.79	2.20	2.50
Tm	0.05	ppm	0.29	0.32	0.26	2.30	0.26	0.29	0.38
Yb	0.05	ppm	1.79	1.97	1.61	14.80	1.60	1.60	2.10
Lu	0.01	ppm	0.27	0.30	0.24	2.10	0.25	0.23	0.33

* CCRMP and USGS Certified Reference Materials

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