



United States Geological Survey

Certificate of Analysis

Mica Schist, SDC-1

Material used in the preparation of this standard was collected in 1963 from the Washington D.C. area. The material is probably of late Precambrian age, and examination of hand specimens reveals a dark grey pervasively foliated muscovite-quartz schist with a homogeneous thinly streaked texture (Flanagan, 1976).

Element concentrations were determined by cooperating laboratories using a variety of analytical methods. Certificate values are based primarily on international data compilations (Abbey, 1983, Gladney and Roelandts, 1988, Govindaraju, 1994). Initial USGS studies (Flanagan, 1976) provide limited background information on this reference material.

Recommended values

Oxide	Wt %	±	Oxide	Wt %	±			
SiO ₂	65.8	0.43	Na ₂ O	2.05	0.09			
Al ₂ O ₃	15.8	0.34	K ₂ O	3.28	0.10			
Fe ₂ O ₃	2.62	0.15	TiO ₂	1.01	0.04			
FeO	3.93	0.15	CaO	1.40	0.07			
Fe ₂ O ₃ T	6.32	0.23	MgO	1.69	0.10			
			P ₂ O ₅	0.16	0.025			
Element	µg/g	±	Element	µg/g	±	Element	µg/g	±
As	0.22	0.01	Ga	21	1.4	Sc	17	2
Ba	630	60	Gd	7	0.4	Sm	8.2	0.5
Be	3	0.5	Hf	8.3	0.2	Sn	3.0	0.2
Ce	93	7	La	42	3	Sr	180	9
Co	18	1	Li	34	3	Th	12	0.9
Cr	64	7	Mn	880	60	U	3.1	0.2
Cs	4	0.2	Nd	40	4	V	102	12
Cu	30	3	Pb	25	2	Zn	103	8
F	600	30	Rb	127	7	Zr	290	30
			Sb	0.54	0.05			
Element	µg/g		Element	µg/g		Element	µg/g	
B	13		Hg	0.2		Tb	1.2	
Cl	32		Ho	1.5		Tl	0.7	
Dy	6.7		Nb	21		Tm	0.65	
Er	4.1		Ni	38		W	0.80	
Eu	1.7		Ta	1.2		Yb	4	

Denver, Colorado
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Bibliography

Abbey, S., 1983, Studies in "Standard Samples" of Silicate Rocks and Minerals 1969-1982, Canadian Geological Survey paper 83-15, p-114.

Flanagan, F.J., 1976, Descriptions and Analyses of Eight New USGS Rock Standards, U.S. Geological Survey Professional Paper 840, p 192

Gladney E.S., and Roelandts, I., 1988, 1987 Compilation of Elemental Concentration Data for USGS BHVO-1, MAG-1, QLO-1, RGM-1, SCo-1, SDC-1, SGR-1, and STM-1, Geostandards Newsletter, 12: 253-362.

Govindaraju, K., 1994, 1994 Compilation of Working Values and Descriptions for 383 Geostandards, Geostandards Newsletter, 18:1-158

Glossary

$\text{Fe}_2\text{O}_3\text{T}$	Total iron expressed as Fe_2O_3
C_{tot}	Total carbon concentration
S_{tot}	Total sulfur concentration
Wt %	Percent of total element concentration
$\mu\text{g/g}$	Total element concentration expressed as micrograms of element per gram of solid sample
\pm	One standard deviation

Notes

Unless otherwise indicated total element concentrations are reported for material on an as-received basis, i.e., no drying.

Ordering Information

USGS reference materials (RMs) may be obtained directly from Dr. Stephen A. Wilson at the address or numbers listed below. The price for each bottle of RM is \$ 80.00 (U.S.) **except** DGPM-1 which is \$175.00 (U.S.). This cost includes all shipping and handling charges using normal mail delivery. Urgent requests for RMs should be initiated by FAX or e-mail. If required, overnight delivery is available with these charges added to the final bill.

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