



United States Geological Survey

Certificate of Analysis

Rhyolite, Glass Mountain RGM-2

Material used in the preparation of RGM-2 was collected in 2004, from Glass Mountain, Siskiyou County, California under the direction of Stephen A. Wilson, U.S. Geological Survey. The collection site is at the terminal front of a Holocene obsidian flow and is the same general location used for the collection of RGM-1. The sample is classified as a Rhyolite on the basis of its high silica and total alkali contents and it is assigned to the calc-alkali series because of its high CaO to total iron ratio.

Element concentrations were determined in a round robin study involving a select set of international laboratories. Recommended total element concentrations are reported when analytical results provided by three individual laboratories using a minimum of three independent analytical procedures are in statistical agreement. Information values with standard deviations, are provided when two or more laboratories using at least two independent analytical procedures have provided information. Information values without standard deviations represent information from a single laboratory or analytical procedure.

Recommended values

Element	Wt %	+/-	Oxide	Wt %	+/-
Al	7.31	0.16	Al ₂ O ₃	14.0	0.30
Ca	0.88	0.02	CaO	1.23	0.03
Fe _{TOT}	1.30	0.03	Fe ₂ O ₃ _{TOT}	1.86	0.04
K	3.61	0.13	K ₂ O	4.35	0.16
Mg	0.17	0.01	MgO	0.28	0.02
Na	3.07	0.09	Na ₂ O	4.14	0.12
P	0.02	0.006	P ₂ O ₅	0.05	0.014
Si	34.3	0.19	SiO ₂	73.4	0.41
Ti	0.15	0.014	TiO ₂	0.25	0.023

Element	µg/g	+/-	Element	µg/g	+/-
As	3.3	0.3	Nd	20	1
Ba	842	35	Pb	20	1
Ce	48	3	Rb	147	5
Co	2	0.3	Sc	5	0.3
Cu	9.8	0.8	Sm	4	0.2
Ga	16	1	Sr	108	5
Gd	3.6	0.3	Th	15	1
Ho	0.8	0.1	U	5.9	0.9
La	25	3	Y	24	2
Lu	0.4	0.03	Zn	33	2
			Zr	222	17

(Over)

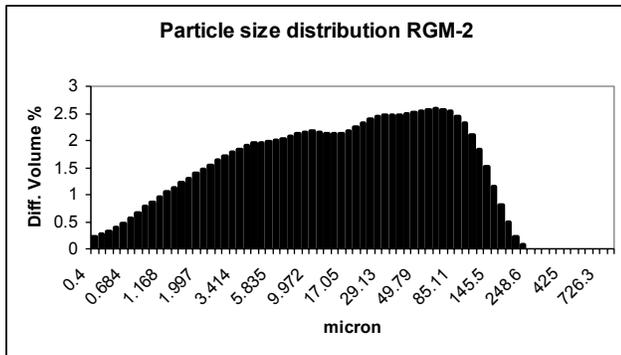
Information values

<u>Element</u>	<u>ug/g</u>	<u>+/-</u>
Be	2.5	0.1
Cl	536	
Cr	4	
Dy	3.3	0.2
Er	2.2	0.05
Eu	0.7	0.09
Hf	6.0	0.6
Li	58	3
Mn	273	8

<u>Element</u>	<u>ug/g</u>	<u>+/-</u>
Mo	2.5	0.5
Nb	9	
Ni	4	
Pr	5	0.2
Sb	0.8	
Sn	4	0.2
Ta	1	
Tb	0.6	0.05
Tl	0.9	
W	2	

Glossary

Wt %	Weight percent
<u>ug/g</u>	micrograms/gram
<u>+/-</u>	one standard deviation



Issued June 5, 2009
Denver, Colorado

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