

ARBUCKLE GEOSCIENCES

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Description:	Danby Marble	Item:	2 x 2 x 2 block
PO #	4501122533	Date:	07 June 2010

Analysis of the Danby Marble was performed by ICP emission and XRF solid-state spectrophotometry, both ASTM-approved for the analysis of limestone (marble).

<u>Element</u>	<u>Weight Percent</u>
Calcium as CaO	54.21
(as CaCO ₃	96.80)
Magnesium as MgO	0.44
Aluminum as Al ₂ O ₃	0.68
Iron as Fe ₂ O ₃	0.38
Sodium as Na ₂ O	0.06
Potassium as K ₂ O	0.44
Silicon as SiO ₂	1.48
Loss on Ignition (essentially CO ₂)	<u>42.30</u>
Total Oxides	99.99%

Trace elements sought (in parts-per-million, or milligrams/kilogram = mg/kg)

Sulfur as elemental S	<10
Barium as elemental Ba	20
Strontium as elemental Sr	83
Manganese as elemental Mn	42
Zinc as elemental Zn	<10

This is extremely clean marble. Marble, of course, is metamorphosed limestone, having the same chemical composition as limestone but a different crystal structure because of the application of geologic heat and pressure long, long ago. The above chemistry reflects an extremely clean calcium carbonate limestone. Any chemical user of limestone would be happy to have this as a raw material.

Respectfully submitted,

R. L. Neman, Ph.D.
CEO and Professor Emeritus of Geochemistry

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