

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
WASHINGTON 25, D. C.

National Bureau of Standards
Certificate

Radium Content of Standard Rock Sample

GRANITEVILLE GRANITE

The average of several determinations made cooperatively at Massachusetts Institute of Technology, at the Geophysical Laboratory of the Carnegie Institution of Washington and at the National Bureau of Standards yields the following value for the radium content of the rock sample described below:

3.3 ± 0.2 picograms Ra per gram of rock

These figures are based on measurements of 5-gram portions. The probable error given includes the variations which arise from inhomogeneity of the sample and means that one-half of the number of 5-gram portions taken from any sample at random should fall within the indicated limits.

For the Director,

S.S. No.
P.O. No.
Standard No. 4981

Radioactivity Section
Radiation Physics Division

Petrographic data:- From Sheahan Quarry, in about Section 14, T. 34N., R. 3E., Graniteville, Missouri. Grinding:- The rock was crushed and pulverized in a steel rod mill. It was then screened to pass 60 mesh and be retained on 100 mesh screen.

We are informed that analysis of a typical sample of Graniteville Granite showed the following percentages of the oxides listed:

SiO ₂	76.34	CaO	.65	CO ₂	.02
Al ₂ O ₃	12.30	Na ₂ O	3.85	TiO ₂	.08
Fe ₂ O ₃	.94	K ₂ O	4.59	P ₂ O ₅	.01
FeO	.73	H ₂ O+	.09	MnO	.01
MgO	.08	H ₂ O-	.04	TOTAL	<u>99.73</u>

This analysis is given here only for general information and is not a certified analysis of this standard sample.