INTERNATIONAL ATOMIC ENERGY AGENCY

REFERENCE MATERIAL
FOR
GAMMA-RAY SPECTROMETRIC ANALYSIS
OF
GEOLOGICAL MATERIALS

IAEA/RGK-1

CERTIFICATE OF ANALYSIS

COMPONENT	CONCENTRATION*	CONFIDENCE INTERVAL**
Potassium	44.8 %	± 0.3 %
Uranium	less than 0.001 µg/g	
Thorium	less than 0.01 µg/g	

*Expressed on dry-weight basis (constant weight at 130°C)
**At a significance level of 0.05

DESCRIPTION OF MATERIAL

RGU-1, RGTh-1 and RGK-1 are intended for use in calibrating laboratory gamma-ray spectrometers for the determination of U, Th and K in geological materials. RGK-1 is intended for use in calibrating laboratory gamma-ray spectrometers for the determination of U, Th and K in geological materials. The material is extra pure (99.8%) potassium sulphate supplied by Merck Company. The potassium value and its uncertainty were obtained from repeated measurements by atomic absorption spectrometry in the IAEA Laboratory which confirmed the potassium sulphate value certified by Merck. The upper limits of the uranium and thorium values were estimated by the IAEA Laboratory using fluorimetry and activation analysis, respectively. A complete description of RGK-1 may be found in the reference.

REFERENCE

Preparation of Gamma-ray Spectrometry Reference Materials RGU-1, RGTh-1 and RGK-1 Report - IAEA/RL/148, Vienna, 1987

This report may be obtained from:
INTERNATIONAL ATOMIC ENERGY AGENCY
Agency's Laboratories
Analytical Quality Control Services
P.O.Box 100
A-1400 Vienna, AUSTRIA