

Four-Channel Gamma Spectrometer

This microcomputer-controlled four-channel gamma spectrometer is designed for precise measurement and analysis of gamma radiation. It features a sensitive detector, advanced signal processing, and a user-friendly interface for efficient data acquisition and interpretation.



Product Overview

Precision Gamma Spectrometry

This four-channel gamma spectrometer is engineered for high-precision field analysis, capable of simultaneously counting and displaying U, Th, and K content alongside total radioactivity. It features automated peak seeking, spectrum stabilization, and background subtraction to ensure signal integrity and data accuracy. Designed for portability and rugged use, it provides reliable performance in diverse environmental conditions for professional field applications.

Measurement Capabilities

Key Features

- Simultaneous 4-channel counting
- Automated peak seeking and spectrum stabilization
- Automatic background value deduction
- Radioactive abnormal noise alarm
- Low battery and probe signal loss alerts

Sensitivity Thresholds

1 10^{-6} Uranium	2 10^{-6} Thorium	0.2 % Potassium
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Measurement Ranges

Element	Range
Uranium	$1 \times 10^{-6} \sim 1000 \times 10^{-6}$
Thorium	$2 \times 10^{-6} \sim 1000 \times 10^{-6}$
Potassium	0.2% ~ 100%
Total Channel	$2 \times 10^{-6} \sim 1000 \times 10^{-6}$

Performance Specifications

Performance Metrics

Metric	Specification
Repetition (Relative Standard Deviation)	$d \pm 10\%$
Stability (8 Hours)	$d \pm 10\%$
Relative Error (Climate Variation)	$d \pm 15\%$

Physical & Environmental

Dimensions & Weight

Component	Dimensions (mm)	Weight (kg)
Operation Desk	220 x 105 x 175	2.6
Probe	Length: 490, Max Dia: 100	3

Operating Conditions

Temp: -10°C to +55°C, Humidity: Up to 95%

Power

Power Supply

Six 1# batteries, current d90mA