

Gamma Ray spectrometer Handheld γ Ray Spectrometer



Application Fields:

Exploration of uranium, thorium, potassium, oil, coal, gold and many other minerals.

Radioactive geological mapping

Radiation environmental monitoring.

Radioactivity detection of building materials

The instrument meets the requirements of EJ/T 584-2014 Portable gamma-ray radiometer and four channels gamma-ray spectrometer used in the exploration.

Instrument Characteristics

Low power consumption, digitization, intelligent, portable, GPS satellite positioning, easy operating.

Automatic spectrum stabilization system can amend spectrum drift caused by temperature and such various factors, and choose to turn off it when measuring.

With function of searching self-stabilization peak automatically, as well as peak display.

Three types of measurement modes: Fast, Timing and Continuous. Display measurement results by count rate or content, with radioactive intensity alarm.

LCD display with backlight, touchable button, menu.

Set parameters, Stored 1500 sets of measurement data. Standard USB interface

Technical Index

1. Detector: ($\phi 75 \times 75$) mm NaI(Tl)
2. Energy Resolution: $\leq 8.5\%$ (137Cs)
3. Measuring Range of Content
eU: $(1 \sim 1000) \times 10^{-6}$
eTh: $(2 \sim 1000) \times 10^{-6}$
K: $(0.2 \sim 100) \times 10^{-2}$
 Σ : $(2 \sim 1000) \times 10^{-6}$

4. Measurement Channel Width
U: (1.66~1.90) MeV, Th: (2.44~2.77) MeV
K: (1.38~1.56) MeV, Σ : (0.5~3.00)MeV

5. Accuracy:
eU: $\leq 7\%$
eTh: $\leq 7\%$ K
: $\leq 12\%$

6. Repeatability: $\leq 5\%$

7. Long-term Stability: $\leq 10\%$ (8h)

8. Power:

Power Consumption : $\leq 650\text{mW}$

One 7Ah Li rechargeable battery can continuously work for 30h

Three AA No.5 batteries can continuously work for 8h

9. Operating Environment

Temperature: $-10^{\circ} \text{C} \sim +55^{\circ} \text{C}$

Relative Humidity: $\leq 90\%$ (50°C)

10. Dimensions and Weight

Console: $200 \times 100 \times 210$ (mm) 1.5kg

Detector: $\phi 100 \times 420$ (mm) 3.2kg

Received Honorary

The instrument won the second prize for technological progress by Ministry of Nuclear Industry in 1994

Instrument Certification

Verified by Radioactive Exploration Measurement Station of Nuclear Industry and issued the verification certificate