



Spectrometer AirSPEC

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based on scintillator detector



APPLICATION

Radiation monitoring and various applications, such as:
Determining the specific effective activity of naturally occurring radioactive materials (NORM) in building materials, raw materials, industrial waste without the need for sampling.
Surface activity measurement of radionuclides such as Cs-137
Surface contamination assessment of soil and for the prospecting and exploration of mineral deposits. The spectrometer is suitable for operation both in laboratory settings and in the field.

FEATURES

- Online gamma spectrum acquisition and readout
- Ambient equivalent dose rate $H^*(10)$ calculation [mSv/h]
- Automatic radionuclide identification
- Radionuclide concentration indication [Bq/m³]
- Two thresholds (warning and alarm) for concentrations and dose rate
- Automatic stabilization of spectrometric channel by K-40 peak
- Rugged outdoor housing with IP67 protection, UV and heat-resistant (up to +90 °C)
- Thermostabilizing housing for a wider range of operating temperatures

LIST OF IDENTIFIABLE RADIONUCLIDES

Ce-144, Te-132, I-131, Ba-140, Cs-134, Cs-137, Zr-95, Mn-54, Co-60, La-140

DESCRIPTION

The AirSPEC scintillation gamma-ray spectrometer is designed for measuring gamma radiation spectra, as well as determining the activity and specific activity of radionuclides in both prepared and natural samples under 2π and 4π geometries.

PURPOSE

- Measurement of local dose rate in the ambient air
- Identification of gamma-emitting radionuclides
- Calculation of radionuclides activity and concentration

| Parameter | Value |
|--|--|
| Detector type | NaI(Tl) Ø51 × 51 mm (LaBr ₃ , CeBr ₃ , SrI ₂ – optional) |
| Measured energies range | 80 – 3000 keV |
| Gamma dose rate measuring range | from 10 nSv/h to 0.1 mSv/h |
| Relative energy resolution on the line 661,7 keV | < 8% for NaI(Tl) < 3.5% for SrI ₂ |
| MCA channels | 1024 |
| Power supply voltage | 4.5 – 18 V |
| Power consumption: - thermostabilization OFF - thermostabilization ON | 1.5 W 25 W |
| Data transfer interface | RS-485 |
| Shell protection level | IP67 |
| Operation temperature | -15 °C ÷ +60 °C |
| Dimensions | Ø55 × 370 mm |
| Weight: | 6.4 kg |