



Spectrometer WaterSPEC

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based on scintillator detector



DESCRIPTION

WaterSPEC is a monoblock unit that integrates a scintillation crystal, photomultiplier tube (PMT), high-voltage (HV) converter, amplifier, multichannel pulse analyzer, and processor unit. WaterSPEC is designed for both indoor and outdoor use in aquatic environments. Its waterproof housing features an IP68 protection rating, offering complete protection against dust and allowing for continuous immersion in water at depths of up to 2 meters.

PURPOSE

- Identification of gamma-emitting radionuclides
- Calculation of radionuclides concentration in water
- Measurement of local dose rate

FEATURES

- Online gamma spectrum acquisition and readout
- Ambient equivalent dose rate H*(10) calculation [mkSv/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
- Data transfer via RS-485 interface
- Rugged waterproof housing with IP68 protection

LIST OF IDENTIFIABLE RADIONUCLIDES

Co-57, Ce-144, Mo-99, Te-132, Ru-103, I-131, Ba-140, Cs-134, Cs-137, Zr-95, Nb-95, Ag-110, Fe-59, Mn-54, Co-60, La-140



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
Data transfer interface	RS-485
Shell protection level	IP68
Operation temperature	0 °C ÷ +30 °C
Dimensions	76 × 420 mm
Weight: - without a cable - with a cable 20 m	2.8 kg 3.7 kg