



# **Gamma-, beta- and alpha- spectrometer-radiometer TRIO**

# Gamma-, beta- and alpha-spectrometer-radiometer TRIO



## DESCRIPTION

The TRIO Spectrometer is designed for detecting gamma, beta, and alpha radiation, as well as measuring specific and volumetric activity of radionuclides in various samples. It supports analysis of natural radionuclides (e.g., Ra-226, Th-232, K-40, Rn-222) and technogenic radionuclides (e.g., Cs-137, Cs-134, Co-60, Tc-99m, Sr-90) in water, food, vegetation, building materials, soil, radiopharmaceuticals, rocks, chemical industry materials, alloys, scrap metal, and other industrial products. Additionally, it measures gross alpha/beta activity in water, making it ideal for environmental monitoring, nuclear safety, and industrial quality control.

## FEATURES

- Ability to manage several channels simultaneously
- Intuitive and user-friendly software
- Low Power Consumption
- Compact size of each chamber
- Free to choose channels of your interest depending on application
- Easy extension of channel quantity
- 100% remote control of the spectrometer TRIO via software package

## COMPLETE SET

- Detection unit
- Lead shielding with stable platform
- Multichannel analyzer
- Analytical software package
- Cable set

Parameter	Value
Energy range, keV - for gamma radiation - for beta radiation - for alpha radiation	40-3000 65-4000 1500-10000
Relative energy resolution on the line 661,7 keV, measuring with radionuclide source Cs-137, %	From 3 to 12 depending on detector type
Maximum throughput, cps	> 5·10 <sup>4</sup>
Integral nonlinearity in the gamma energy range from 40 to 3000 keV, %	1
Integral nonlinearity in the beta energy range from 65 to 4000 keV, %	2
Instability of spectrometer indications (energy conversion characteristic) for 24 hours of a continuous operation, %	±1
Operation conditions: - ambient air temperature, 0C	from +10 to +40
- relative air humidity, %	up to 80
- atmospheric pressure in the range of, kPa	from 84 to 106,7
- intensity of magnetic fields of the permanent and variable grid frequencies, A/m	up to 40