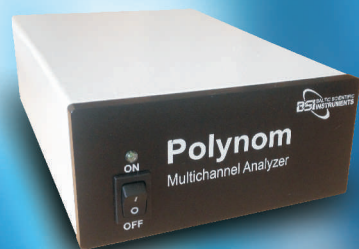
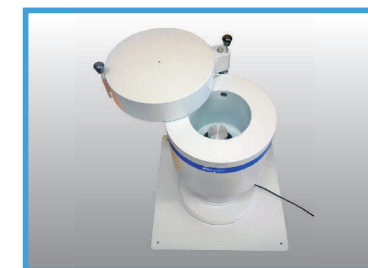


## Specification

Parameter	Value
Type of detectors	NaI(Tl)
	CsI(Tl)
	LaBr3(Ce)
	Polystyrene
	ZnS(Ag)
Energy range, keV	
- for gamma radiation	40-3000
- for beta radiation	65-4000
- for alpha radiation	1500-10000
Relative energy resolution on the line 661,7 keV,	
- for NaI(Tl) (63x63mm)	< 8,5
- for NaI(Tl) (76x76mm)	< 9
- for NaI(Tl) (150x100mm)	< 12
- for CsI(Tl) (50x50mm)	< 9
- for LaBr3(Ce) (38x38mm)	< 3,5
Relative energy resolution on the conversion electron line 624 keV	
- for Polystyrene detector	< 15
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
Detection sensitivity for beta radiation of 90 Sr-90Y (energy range 550-2300 keV), cps/Bq	
- for Polystyrene detector	> 0,15
Detection sensitivity for alpha radiation of 239 Pu, cps/Bq,	
- for ZnS(Ag) detector	> 0,3
Maximum throughput, cps	> 5·10 <sup>4</sup>



## TRIO $\alpha$ , $\beta$ , $\gamma$ - spectrometer – radiometer

### Application

Spectrometer TRIO is intended for measuring energy distribution of gamma- and beta - radiation, identify gamma-emitting radionuclides, and also for measuring the activity (specific and volumetric activity) natural radionuclides 226Ra, 232Th, 40K, 222Rn, and technogenic radionuclides (137Cs, 134Cs, 60Co, 99mTc, 90Sr and etc.) in different samples. Also it is used for measuring gross specific activity of beta- and alpha- emitting radionuclides in water.

### Complete set (standard)

- Multichannel analyzer (MCA) Polynom
- Spectrometric detectors of gamma – radiation based on NaI(Tl), CsI(Tl) or LaBr3(Ce) crystal
- Spectrometric and Radiometric detectors of beta – radiation based on plastic scintillator (polystyrene)
- Spectrometric Si-detectors of alpha – radiation
- Radiometric detectors of alpha – radiation based on ZnS(Ag) crystal
- Low-background protective chambers
- Vacuum chamber and vacuum gauge with pressure display
- Software for spectrometric analysis

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