BALTIC SCIENTIFIC INSTRUMENTS

Bringing Solutions

Scintillation Detectors

Scintillation Detectors and accessories

DESCRIPTION

Scintillation detectors are used to register and analyze gamma-radiation in energy range from 20 keV to 3 MeV when irradiated with a radioactive source. The detector consists of scintillator crystal optically connected to a photomultiplier tube, wrapped in an antimagnetic screen and placed in a sealed aluminum case. Depending on customer requirements, scintillation detectors can be based on different crystal materials, such as NaI (Tl), CeBr3, LaBr3, SrI or others.

APPLICATION

- radiation monitoring,
- radiation logging in boreholes,
- scintillation spectrometry,
- detection of alpha- and beta-radiation,
- tomography
- high-energy physics
- and many others

ACCESSORIES

- Spectrum stabilization by using Am or LED source
- Digital MCA MCABase
- Analytical software package
- Holders and tripods
- Lead shielding for low background measurements
- Protective cases for underwater applications
- Cable set

Material	Dimensions*, mm	Energy resolution at 662 keV, %	Energy range	Registration efficiency**, %	Advantages
NaI(Tl)	51x51 63x63 76x76 150x100	<7 <7.5 <8 <12	20 keV - 3 MeV	0.65 1.2 2 7.5	Low price
LaBr3(Ce)	51x51 63x63 76x76	<3.1 <3.3 <3.5	20 keV - 3 MeV	1 1.5 2.5	High resolution
CeBr3	25x25 38x38 51x51	<4.2 <4.3 <4.3	20 keV - 3 MeV	0.14 0.4 1	High resolution, Low background and MDA
SrI2	25x25 38x38	<2.8 <2.9	20 keV - 3 MeV	0.14 0.4	Low background and MDA

*** - dimensions for reference only. Choice is not limited to the list.**
**** - at 662 keV by a point-like Cs-137 source at a distance of 5 cm from the detector's top**

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Gamma-rays