



# Specification

Parameter	Value
Relative energy resolution for LaBr3(Ce)	3.5%
Registration efficiency for LaBr3(Ce)	at least 0.6%
Energy range	40 keV ÷ 3000 keV
Integral nonlinearity	< ±1.0 %
Energy conversion function (during 24 hours)	< ±1.0 %
Maximum throughput of the spectrometer	at least 5·10 <sup>4</sup> cps
Speed range of the electric vehicle	
fast mode	4 km/h – 25 km/h
slow mode	0.5 km/h - 4 km/h
Operation setting time	<10 minutes
Continuous operation time	at least 8 hours
Completely charged	10 hours
Temperature range	from -10°C to +55°C
The average MTBF	10000 hours



## Mobile Radiation Monitor GammaCART

### Application

Mobile spectrometric system Mobile Radiation Monitor is designed to measure gamma radiation energy distribution, identify gamma emitting radionuclides, as well as calculate specific and surface activity of gamma emitting radionuclides under conditions of their natural occurrence and at nuclear industry premises. In addition, the system can be used for radiation monitoring, e.g., for examination of large areas, searching lost or stolen gamma radiation sources, study of radionuclide precipitation near radiation hazardous sites without preliminary sampling.

### Complete set (standard)

- Electric vehicle as a mobile platform
- Gamma radiation spectrometer containing:
  - Gamma radiation detector(s);
  - Multichannel channel analyser Polynom;
- Thermostabilization system (for NaI(Tl) or LaBr3(Ce) detectors) containing:
  - Thermostabilizing housing with a built-in heat exchanger;
  - Cooling and heating system box;
  - Hoses for circulation of the cooling liquid;
- Navigation system including a external antenna;
- Shockproof toughbook operable in harsh conditions;
- Router with antenna which provides connection between the analyser, navigation system and toughbook;
- Fixation and positioning system for the detection units;
- Charger for the electric vehicle.

### Accessories

There are various modifications of system Mobile Radiation Monitor:

- Containing spectrometer with 1 or 2 NaI(Tl) scintillation detectors;
- Containing spectrometer with 1 or 2 LaBr3(Ce) scintillation detectors;
- Containing spectrometer with 1 or 2 HPGe detectors

**Baltic Scientific Instruments**  
 Ramulu str. 3  
 Riga, LV - 1005  
 Latvia

Phone: (+371) 67383947  
 Fax: (+371) 67382620  
 Email: sales@bsi.lv  
 www.bsi.lv



Surface activity measurement		
Distance between the detector's surface and the ground, cm	Radionuclide	Activity measurement range, Bq/kg
25	<sup>137</sup> Cs	0.035 ÷ 1300
	<sup>60</sup> Co	0.021 ÷ 650
	<sup>134</sup> Cs	0.024 ÷ 500
40	<sup>137</sup> Cs	0.04 ÷ 1400
	<sup>60</sup> Co	0.023 ÷ 720
	<sup>134</sup> Cs	0.025 ÷ 560
60	<sup>137</sup> Cs	0.046 ÷ 1600
	<sup>60</sup> Co	0.028 ÷ 820
	<sup>134</sup> Cs	0.028 ÷ 620