

**Find, measure, and identify
radioactive materials...**

**..with one hand-held
instrument.**



FEATURES

- **One Button, Menu Driven Operation**
- **Distinguishes Between Man Made And Natural Isotopes**
- **Identifies Shielded and Unshielded Sources**
- **Audio Search Mode**
- **Energy Corrected Dose**
- **Fast, Accurate Isotope Identification**
- **High Sensitivity NaI or BGO, with G/M Tube**
- **Light Weight, Rugged, Ergonomic Design**
- **Energy Ranges from 18keV to 3 MeV**
- **User Editable Nuclide Library**
- **Extended Battery Life**
- **High-Contrast Back-Lit Display**
- **Different Menu Languages Available**



miniSPEC

EXPLORANIUM
RADIATION DETECTION SYSTEMS

GR-130

- 3** ● Survey Meter
● Dosimeter
● Multi-Channel Analyzer

instruments

- 1** ● COMPACT
● RUGGED
● FIELD UNIT



HEALTH CARE INDUSTRY

- Radiation survey of radiotherapy facilities.
- Identification and control of radioactive source inventory.
- Determine Dose Rates and Provide Nuclide Verification of Radiotherapy Patients
- Waste inspection for radioactive contamination.
- Emergency response.



NUCLEAR INDUSTRY

- Waste site characterization and monitoring.
- Health Physics field inspections.
- Surveys of licensed radioactive gauges.
- Inspection of incoming and outgoing material for radioactive contamination.
- Assay of field samples.
- Emergency response to transport accident and spills.
- Law enforcement and customs.
- International safeguards.



METALS INDUSTRY

- Scan vehicles to locate a radioactive source.
- Determine if radioactive content is acceptable (refractory materials).
- Spectral analysis of outgoing dust loads.
- Identify nuclides for risk assessment.
- Spectral analysis of suppliers products to avoid accepting contaminated material.
- Identification of sources following vehicle portal alarm.



The Convenience Of A Field Instrument, The Power Of A Lab Spectrometer.

The miniSPEC is an easy-to-use hand-held gamma instrument, allowing the user to: **Survey** (Find It) for locating contamination; **Dosimeter**, (Measure It), for determining the hazard level and **Analyze** (Identify It) for identifying the nuclides involved for risk assessment.

The miniSPEC is a versatile multi-channel analyzer, ideally suited for industrial, nuclear, medical and geophysical applications. Through a fully user-editable library and a variety of energy ranges, a user can customize the unit for their unique environment.

The newest version of the miniSPEC; the miniSPEC-*m*, has been specifically designed for the medical community. The mini-SPEC-*m* detects gamma ray peaks from 18 keV up to 3.0 MeV which allows the miniSPEC-*m* to find and identify nuclides such as I-125, Pd-103, Tl-201 along with the standard group of nuclear medicine radionuclides.

A truly portable and versatile field instrument, the miniSPEC represents the state-of-the art in handheld gamma-ray spectrometers.



miniSPEC Standard Package

BUILT-IN LIBRARY

Industrial

Am-241	Americium 241
Ba-133	Barium 133
Bi-207	Bismuth 207
Ce-139	Cerium 139
Co-60	Cobalt 60
Cs-137	Cesium 137
Eu-152	Europium 152
Eu-154	Europium 154
Ir-192	Iridium 192
Kr-85	Krypton 85
Mn-54	Manganese 54
Na-22	Sodium 22
Na-24	Sodium 24

Medical

Cd-109	Cadmium 109	Pd-103	Palladium 103
Co-57	Cobalt 57	Se-75	Selenium 75
Co-58	Cobalt 58	Sm-153	Samarium 153
Cr-51	Chromium 51	Sn-113	Tin 113
F-18	Fluorine 18	Sr-85	Strontium 85
Fe-59	Iron 59	Tc-99m	Technetium 99m
Ga-67	Gallium 67	Tl-201	Thallium 201
I-123	Iodine 123	Xe-133	Xenon 133
I-125	Iodine 125	Y-88	Yttrium 88
I-129	Iodine 129	Y-90m	Yttrium 90m
I-131	Iodine 131		
In-111	Indium 111		
Mo-99	Molybdenum 99		

Nuclear

Pu-239	Plutonium 239
U-233	Uranium 233
U-235	Uranium 235
U-235/238	Depleted Uranium

NORM

K-40	Potassium 40
Ra-226	Radium 226
Th-232	Thorium 232
U-238	Uranium-238

MODES OF OPERATION

Survey

- Counts/second with adjustable integration time.
- Variable audio tone indicates radiation intensity.
- Histogram plot of previous 60 data readings.
- 80 cps per 1 MBq at 1 meter, max 65,000 cps.

Dosimeter

- Highly accurate, energy-corrected dose.
- Displays current dose rate as well as accumulated dose.
- Selectable units (R, Sv, Gy).
- 0.5 μ R/h to 10R/h (5nSv/h to 100mSv/h).

Analysis

- Accumulated spectrum is displayed and peaks can be inspected.
- Peaks are listed showing peak position, area and resolution.
- Fast, accurate nuclide identification from user-editable library.
- Energy Ranges: Standard 25keV - 1.5MeV, 50keV - 3MeV
Medical 18keV - 750keV, 50keV - 3MeV
- Three, user-defined Regions-of-Interest (ROI).

FOR MORE INFORMATION

EXPLORANIUM

RADIATION DETECTION SYSTEMS

Proven Leadership In Innovative And Reliable Radiation Detection Technology.

● NUCLEAR

Contact: Lee Maher
E-mail: maher@exploranium.com
6108 Edwards Blvd. Mississauga, Ontario CANADA L5T 2V7
Tel. (905) 670-7071 ext. 325 Fax: (905) 670-7072

● NORTH AMERICAN OFFICE

Contact: John Bublitz
E-mail: jbublitzsr@attglobal.net
237 South Peters Rd., Knoxville, Tennessee USA 37923
Tel.: (865) 539-6099 Fax: (865) 539-1916

● INTERNATIONAL OFFICE

Contact: Roy Natherson
E-mail: natherson@exploranium.com
6108 Edwards Blvd., Mississauga, Ontario CANADA L5T 2V7
Tel.: (+1) 905 670-7071 ext. 304 Fax: (+1) 905 670-7072

● EUROPEAN OFFICE

Contact: Leif Lofberg
E-mail: leif.lofberg@radiationdetection.se
Backehagen 35, S-791 91 FALUN, SWEDEN
Tel.: (+46) 23 21480 Fax: (+46) 23 24081



www.exploranium.com



SPECIFICATIONS

Physical

- Molded handle with an integrated joy stick permits "one button", menu driven operation.
- Dimensions are 165mm X 229mm X 102mm (6.5" X 9" X 4").
- Weatherproof, water resistant aluminum case.
- 2 "D" cell alkaline or rechargeable batteries permit 15 to 25 hours of continuous operation.
- 9600 baud, RS-232 serial port and an external charger connection.
- Weight is 2.4kg (5.2lbs) including batteries.
- Back-lit LCD display.
- Single hand (left/right) operation, even with protective gloves.
- Drop tested 0.75 meter onto concrete (with detector).

Detector/Spectrometer

- Sodium Iodide (NaI) 4.5 cu in (74 cu cm) volume detector. 38mm X 38mm X 51mm (1.5" X 1.5" X 2") or, Bismuth Germanate Oxide (BGO) with an integral PMT.
- Internal thermal protection and shock mounted
- 256 channel gamma ray spectrometer.
- Auto gain stabilization with Cs-137 check source.
- High dose, Geiger Mueller tube extends range to 10R/h (100 mSv/h).

Features

- Standard library of 45 nuclides.
- User-editable library.
- Different menu languages available.
- Store up to 16,000 data points or 122 spectra; time and date stamped.
- Energy ranges of 18 keV-750 keV, 25keV- 1.5MeV, 50keV-3MeV.
- All recorded data may be visually displayed or imported into SPECVIEW spreadsheets.

Environmental

- Operating temperature of -10°C to +50°C.
- RFI/EMI shielding complies with FCC (47 CFR part 15) for class A.
- Full CE certification.

Options

- Docking station for auto charging and stabilization.
- NaI or BGO detectors are available.

AGENT INFORMATION