Thermo Scientific RadEye SPRD

Spectroscopic Personal Radiation Detector

The RadEye SPRD is a high-performance radiation detection and radionuclide analyzer designed to detect, locate and identify radioactive nuclides such as nuclear weapons, dirty bombs, orphaned or purposely masked sources.

Key Features and Benefits

- Radionuclide identification
- Belt holster, small form factor, and light weight enables hands-free operation
- Small form factor and light weight, below 200 g
- Vibration alarm mode for covert operation
- Raised buttons with positive response for gloved hand operation
- Intuitive interface with easy to read
 results
- Minimum attention required for operation





The detection and analysis of hidden radioactive nuclides requires a radiation identification tool with high sensitivity and accuracy. Detect, localize and identify Gamma sources with the pager-sized Thermo Scientific[™] RadEye[™] SPRD Spectroscopic Personal Radiation Detector.

The RadEye SPRD provides first responders and law enforcement teams like border guards or special forces with highperformance detection and radionuclide analysis for any scenario. Metal recyclers and producers that need to detect, locate and identify orphan radionuclides in their incoming scrap material can now add an additional level of security, using the RadEye SPRD.

The ability to perform nuclide identification in a pager sized Personal Radiation Detector (PRD) offers advantages over current market options; including, compact size, low weight, long battery life time and low cost of ownership. This combination makes the RadEye SPRD a perfect tool for users detecting, locating and identifying sources of radiation as an secondary requirement of their main task.

Like the well-established RadEye PRD, the RadEye SPRD offers the patented Natural Background Rejection (NBR) technology. NBR provides high sensitivity with immediate high selectivity to differentiate between natural and man-made radiation during search and find operation with the device. Once an alarm indicates the presence of a significant radiation contribution, the RadEye SPRD can be rapidly switched into radionuclide identification mode for immediate analysis. The RadEye SPRD's editable trigger list allows user/supervisor selection to nuclides of concern, like ANSI N42.48, medical or industrial applications.



The RadEye SPRD can be worn conveniently in its holster secured to a standard service belt, providing easy alarm acknowledgement and visibility of the alarm LED. Its compact size does not interfere with sitting or squatting. Radiation alarms can be annunciated by sound, light and/or vibration ensuring that the user is alerted in all conditions. Raised buttons are designed for activation while wearing hand gloves. Easy to read and intuitive symbols, menu text and/or terms are displayed on the large LCD screen.







Nuclide identification window

Spectrum window

Lutetium test adapter

In addition the RadEye SPRD offers:

- An expansive library of radionuclides, including medical-, industrial- and special nuclear-class materials, that can identify substances in the field and provide actionable intelligence to response authorities and other organizations;
- The same industry-proven, rugged and portable design of the RadEye product line, which simplifies adoption for teams with previous RadEye experience;
- A significantly reduced cost compared to other nuclide identifiers in the market, increasing the availability of this technology; and
- Sophisticated algorithms that allow the instrument to automatically distinguish between natural background radiation, radiation coming from benign sources (such as an individual who has undergone a nuclear medicine treatment) and potentially dangerous radionuclides of interest.

Technical specification of the Thermo Scientific RadEye SPRD

| Detector material: | Csl(TI)-detector | | |
|---------------------|--|--|--|
| Dose rate range: | 0.01 μSv/h 250 μSv/h [1 μR/h 25 mR/h] | | |
| Energy response: | 40 3000 keV | | |
| Measurement units: | cps, cpm, Sv/h, rem/h, R/h | | |
| Overload: | Tested up to 10 Sv/h [1000 R/h] | | |
| Protection rating: | IP 65 | | |
| Battery type: | Rechargeable and non rechargeable batteries, 2 x AAA | | |
| Battery lifetime: | Approx. 170 h on alkaline batteries | | |
| Size: | 104 mm x 67 mm x 41 mm [4.1" x 2.6" x 1.6"], with rubber shock protector | | |
| Weight: | 190 g [0.4 lbs] | | |
| Number of channels: | 1024 | | |

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