peo DETECTION kromek® safer and healthier world

RayMon®

Rapid in-the-field spectral analysis with the RayMon high-performance handheld spectrometer and its set of interchangeable probes

peo DETECTION

RayMon

Your complete kit for detecting and analysing radionuclides in the field

Cover all bases with Kromek's high-performance RayMon handheld spectrometer and interchangeable probes: CZT, NaI and Alpha Beta.

Portable n Easy to Deploy n Simple to use

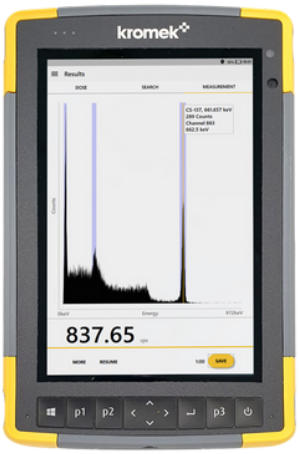
Highly portable and lightweight, the RayMon brings previously expensive and lengthy, lab-based spectral analysis into the field. With its easy-to-use interface, experts and less-experienced users alike can collect and analyse the results they need in situ with speed and precision .

Applications include:

Health physics Nuclear installation monitoring Nuclear accident response
Security screening undertaken by customs, police, fire and rescue services
Military Decomissioning Site surveys Civil Defence Customs
First responders Homeland Security Identification of orphan sources
Treaty and non-proliferation compliance Nuclear research
Combatting illegal radioactive traffic

RayMon

Highly portable and lightweight, the RayMon brings previously expensive and lengthy, lab-based spectral analysis into the field. With its easy-to-use interface, experts and less-experienced users alike can collect and analyse the results they need in situ with speed and precision.

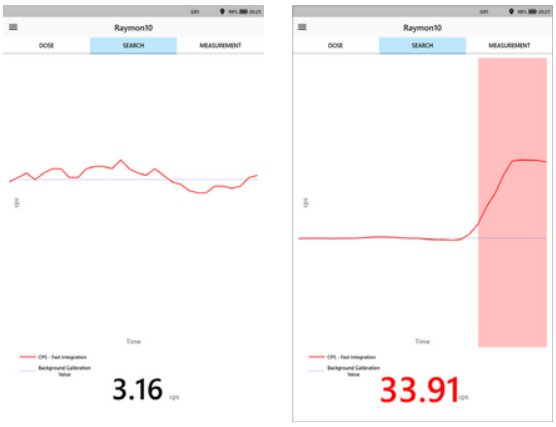


Measurements

The RayMon's preinstalled softaware contains a library of 94 radionuclides, allowing advanced Gamma analysis and radioisotope classification for a wide range of sources. Custom radionuclides can also be added to the RayMon's library.

Key information such as counts per second can be viewed quickly on the Dose Screen in real-time. either numerically or visually as a gauge.

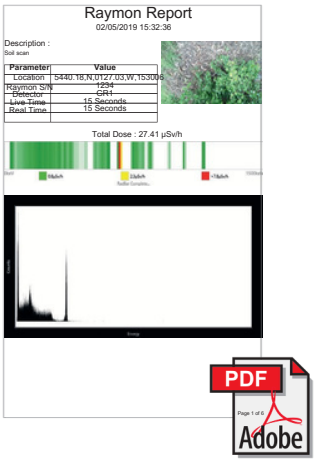
In Search Mode, clear visual graphs indicate when count rate is on the rise, directing the user to the location of the source.



Exporting Data and Sharing Reports

All reports and data files on the RayMon can either be exported via USB or shared via email. Everything is in one place; the shared PDF report has all the data files attached to the document.

More detailed analysis is possible by accessing the even broader radionuclide library available within Kromek's desktop PC gamma spectroscopy software, MultiSpectTM Analysis (MSA). Simply open the exported spectraldata.spe file within the PDF report into MSA.

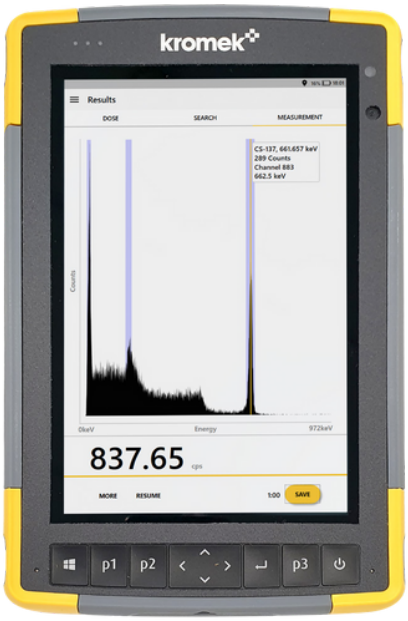


Key Features:

• Highly portable, compact and ruggedized • Rapid spectral analysis in situ • Available with Kromek's high resolution CZT Probe, highly sensitive NaI Probe and Alpha Beta Probe for the ultimate flexibility in in- field operations Pre-loaded library of 94 radionuclides for analysis of a wide range of sources, with option to add custom nuclides for specific applications

- Outputs a variety of reports with date/time, probe type, device serial number, photo, GPS positioning, radiation spectra and isotope identification*
- Measurements can be saved as .spe and IEC1455 file formats, compatible with Mirion Technology's GenieTM software
- Sources quickly located with Search mode
- Dynamic search and alarm capability
- Dose measurements and count data clearly displayed
- Feature locking with PIN codes
- High-performance spectroscopy presented on a simple-to-use interface, for use by experts and beginners alike

*isotope ID is provided only if this setting is turned on

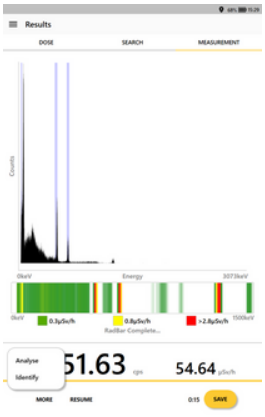


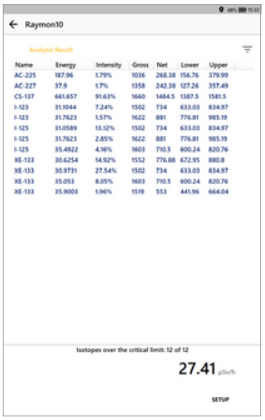
Spectrum analysis for advanced users

The RayMon makes reporting easy, even for beginners and new users.

The device contains a detailed library of the emission lines from 94 radionuclides that can be configured by the user to give focus to the radionuclide(s) of interest.

Spectral peaks can be interpreted with ease, with the emission lines passing a statistical critical limit test clearly highlighted. Emission peak parameters are also calculated and presented on screen as part of the on-device analysis, further quickening the analysis process.



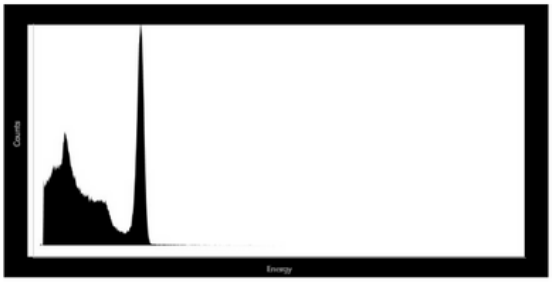


NaI Probe

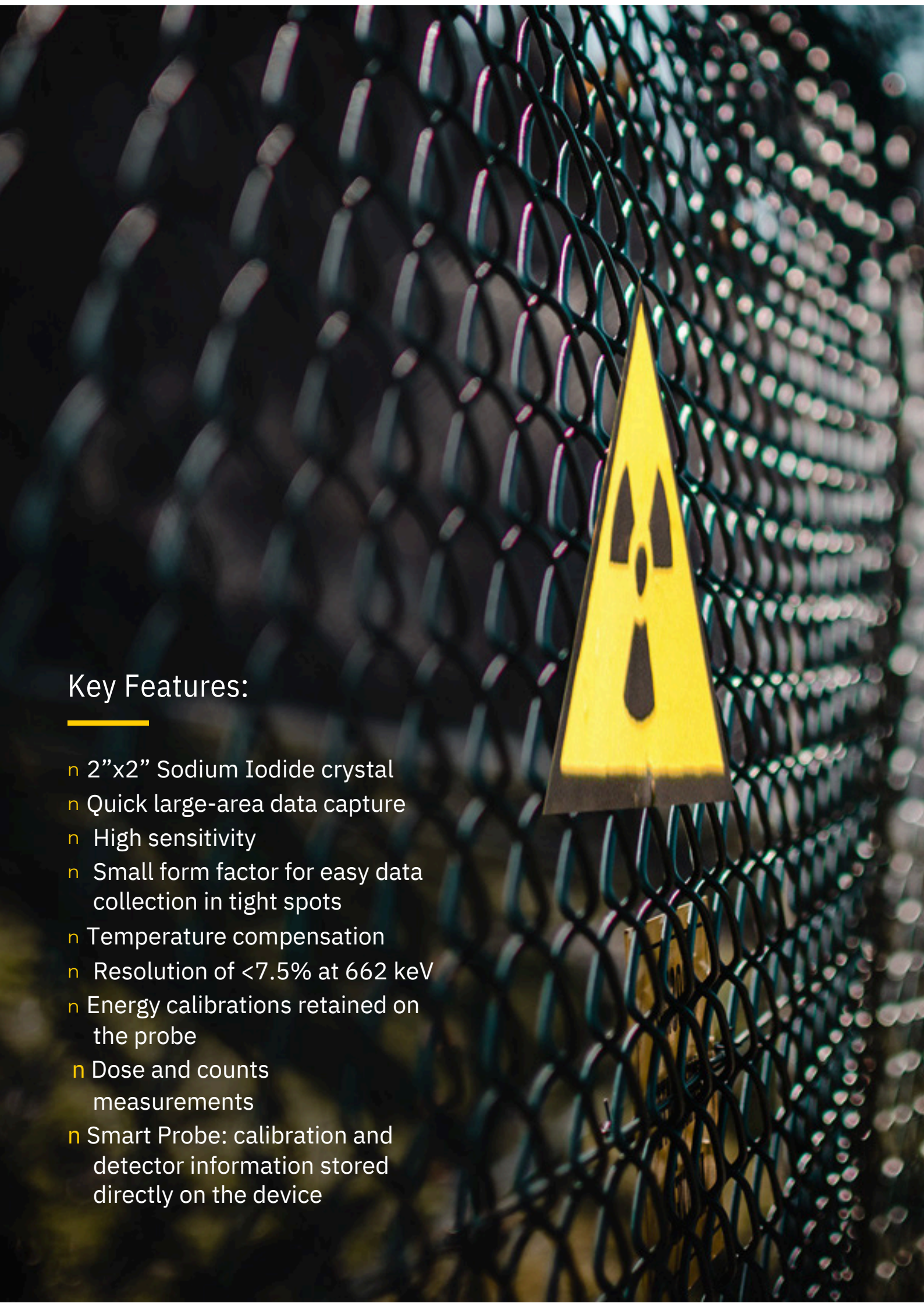
When you need to collect count data in low dose environments, simply plug Kromek's NaI Probe into the RayMon, and get started. The high sensitivity and efficiency of the 2" x 2" Sodium Iodide (NaI) crystal ensures even the weakest sources can be detected.

The incorporation of silicon photomultiplier technology gives the device it's small form factor and makes the NaI Probe ideal for taking measurements in restrictive areas.
With a resolution of <7.5% at 662 keV, the NaI Probe produces defined spectral peaks for reliable spectral analysis on the RayMon. Further confidence in the data and analysis is ensured with temperature compensation, ensuring a consistent performance throughout the operable temperature range. The smart probe stores calibration and all other relevant data on the device.

The probe also includes a high dose sensor to ensure measurements continue to be taken when the NaI probe becomes saturated with counts.



The NaI Probe produces defined spectral peaks for reliable spectral analysis on the RayMon



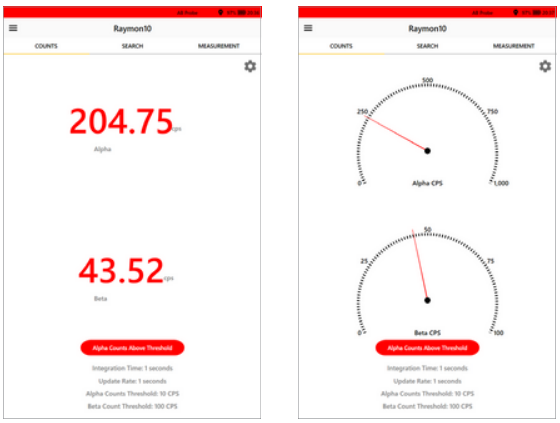
Key Features:

- 2”x2” Sodium Iodide crystal
- Quick large-area data capture
- High sensitivity
- Small form factor for easy data collection in tight spots
- Temperature compensation
- Resolution of <7.5% at 662 keV
- Energy calibrations retained on the probe
- Dose and counts measurements
- Smart Probe: calibration and detector information stored directly on the device

Alpha Beta Probe

Use Kromek's Alpha Beta Probe with the RayMon when searching for contamination in a target area and instantly see readings on screen

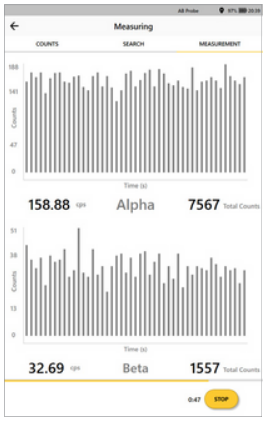
The compact lightweight build of the probe means the device can be used in one hand, the RayMon in the other, comfortably, for extended amounts of time.
The smart probe is able to store detection and calibration information on the device.



CPS data is clearly displayed on the RayMon screen, either numerically or visually as a gauge, depending on the needs of the user.

Key Features:

- Durable, lightweight and flexible in its application
- Small form factor to easily fit in into any scanning location
- The removeable standoff ensures the detector face is not contaminated during scans
- Versatility in data displayed for application
- Smart Probe: calibration and detector information stored directly on the device



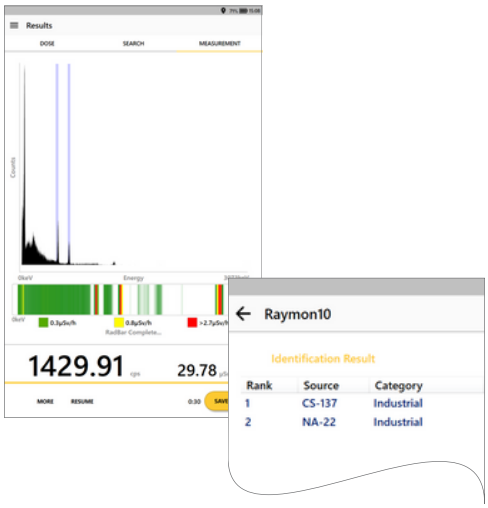
The measurement screen allows the user to view count data for Alpha and Beta radiation as a bar chart meaning changes in count rate can be easily visualised.

Health physics Nuclear accident response
Decomissioning Site surveys Civil Defence
Customs First responders Nuclear research
Identification of orphan sources
Homeland Security

CZT Probe

Using Kromek's high resolution CZT Probe with the RayMon is the obvious choice when precise analysis is paramount.

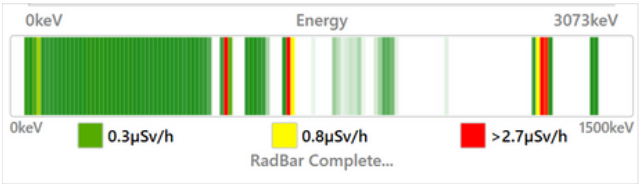
The high resolution of <2.5% at 662 keV of the 1cm3 CZT crystal housed in the probe produces clearly defined spectral peaks for an unambiguous interpretation of radionuclides present, even when faced with mixed or shielded sources.



Once a spectrum has been recorded, fully automated radionuclide identification can be performed against a library of commonly encountered radionuclides to ANSI N42.48 standards.

The ID of any unknown radionuclide present can be extrapolated from the spectral analysis produced on the RayMon table.

With its small form factor, operation at room temperature without the need for cooling, and direct conversion, Kromek's CZT Probe is a cost-effective and field-friendly alternative to HPGe detectors.



Unique RadBarTM technology included for spectral dose visualisation, simplifying the process of categorising major dose contributors

Key Features:

- 1cm3 CZT crystal
- Quickly detect, measure and accurately identify Gamma-emitting radionuclides
- High resolution radioactive isotope identification and spectral analysis
- Automated radionuclide ID for ANSI N42.48 *
- Dose and counts measurements
- Unique RadBarTM technology included for spectral dose visualisation, simplifying the process of categorising major dose contributors
- Small form factor for data collection and analysis in difficult to access areas
- Spectral data exports are compatible with Kromek's desktop spectroscopy software, MultiSpect® Analysis

Applications Include:

Nuclear installation monitoring

Nuclear accident response

Decomissioning Site surveys

Identification of orphan sources

Nuclear research

Combatting illegal radioactive traffic

**Only Dose and count are displayed directly on the screen of the RayMon during a scan. Isotope ID and spectral analysis can be found after by going into menu.*