



Radhound Mini and Mini F

Radiation Contamination Monitor

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EXPERIENCE & EXPERTISE

A compact and ergonomic digital contamination monitor

Providing the sensitive response needed for the monitoring of gamma contamination, the Radhound Mini addresses the common pitfalls of traditional monitors such as excessive weight, cost, and fragility.

Available in two models, including a floor monitor, the Radhound Mini is a lightweight solution with an ergonomic design for single-handed contamination monitoring.

Simply point and aim.

Application areas

- Health physics for contamination monitoring on surfaces, clothing, and objects, etc.
- Nuclear Medicine departments, suitable for e.g. ^{99m}Tc , ^{125}I , ^{131}I , ^{18}F .
- Radiological survey work and laboratory use.
- Veterinary clinics focused on equine scintigraphy.



Introducing SiPM detectors

The Radhound Mini features an integrated NaI(Tl) Silicon Photomultiplier (SiPM) detector. SiPMs are solid-state devices making them resistant to shock and vibrations that may occur because of extensive handling by users. They are commonly used in radiation detection and medical imaging systems.

Reduced size

Each detector has thousands of micron-sized avalanche photodiodes (APD) arranged in a bespoke array for optimal optical coupling with the Radhound Mini's scintillation crystal. This reduces the monitor's size and weight while maintaining counting efficiency.



User-friendly operation

Adjustable Energy Window

The energy window of interest can be open or set to low, medium, or high to optimise sensitivity for lower energy gamma radiation or higher energy PET isotopes.

Smart Averaging Software

Smart averaging software ensures a steady display that can be read with confidence, providing a quick response to ensure no contamination has been missed.

Adjustable Alarm Levels

Fully adjustable alarm levels and optional sounds.

Integrator Function

Integrator function available for surveying options.

Durable

Resistant to shock and vibrations caused by extensive handling thanks to solid-state technology.



LCD Display

Clear backlit LCD display with count rate displayed in large clear numbers and a bar scale underneath.

Re-chargeable Batteries

Micro-USB connection to charge NiMH AA-cell batteries, which can be easily swapped if needed.

Lightweight

Weighs just 610 g.

Wall-mount for storage

The monitor can be stored in its wall-mount and plugged in to the charger to ensure it is ready for its next use.

Specifications

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| Dimensions | 170 (H) x 88 (L) x 72 (W) mm |
| Mass | 610 g |
| Power Requirements | 2 x AA Batteries (1.5 V each); rechargeable |
| Counting Efficiency (Open Window; sealed source at 5 mm from end window) | ⁵⁷ Co: 20%, ¹³³ Ba: 35%, ²² Na: 12%, ¹³⁷ Cs: 8%, ⁶⁰ Co: 6% |
| ^{99m}Tc Counting Efficiency (Open Window, 882 MBq/ml, source at 30 mm from end window) | 1.8 % |
| FWHM Spatial Resolution | TBC |
| Background Count Rate (30 s Averaged Measurement) | Low Window: 2 cps Med Window: 0.8 cps High Window: 0.1 cps Open Window: 4.5 cps |
| Detector Operating Voltages | SiPM based detector – typical 40 V dc bias |
| Default Discrimination Window Settings (DAC Values) | Low: 80 - 450 Medium: 450 - 1500 High: 1500 - 3000 Open: 80 - 4095 |
| Lower and Upper Detection Limits | Upper limit: 20,000 cps (Over range), Alarm level selectable in software |
| Detector Energy (Gamma) | Optimised for ^{99m} Tc (140 keV); capable of measuring 50 keV to 1.5 MeV in the Open Window |

Radhound Mini F

A clean sweep

Back-related injuries are not uncommon in healthcare workers who have to regularly bend and crouch as they sweep for contamination. The Radhound Mini F is designed to mitigate this when performing laborious tasks such as monitoring floors and patient toilets.

The Mini F has the same intuitive operation and functionality as that of the standard model. Users can measure tight and low areas from a standing position, whilst reducing exposure. It is lightweight and well balanced, ensuring that the system can be used comfortably for long periods of time.

And when finished, the Radhound Mini F can be stored tidily in its wall-mount.



1 Metre Carbon Fibre Rod



Service and Support

Southern Scientific has a team of fully qualified service engineers, who support customers spanning the length and breadth of the UK. We can provide factory or on-site service as required, based on single visits, planned maintenance or full support under contract. We maintain a high level of spare parts, ensuring lifetime support capability.

Our systems group can offer its service for the larger installed equipment, from initial planning to installation, completion and training. We can provide expert knowledge and experience, gained through involvement in a number of large-scale projects throughout the years.

ISO Certified

Southern Scientific Ltd is certified to ISO 9001 and ISO 13485 representing the high level of quality assurance and management that we provide at every stage of the supply process, whether a product is distributed on behalf of our trusted manufacturers or constructed in our UK workshop. This accreditation means that our customers can place an order knowing that the delivered product will be suitable for its intended use, fully compliant with EU legislation and in full working order.

All our products are CE marked.



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