Radiation Monitors

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LabLogic

EXPERIENCE **&** EXPERTISE

Radhound Monitors

Radhound monitors are ideal for use within a large range of sectors, including academia, pharmaceutical research and nuclear medicine/PET. These meters are compatible with a broad range of Geiger, sodium iodide and plastic scintillator based probes to cover the whole spectrum of contamination and dose rate measurement requirements.

Tracerco Monitors

The Tracerco range is unique, robust and innovative – great for use in the laboratory or by radiation protection professionals out in the field.

Hidex

Hidex is one of the world's leading manufacturers of innovative instrumentation for radiation measurement. The company produces a range of liquid scintillation counters and gamma counters used in a wide variety of applications, ranging from low-level measurements of naturally occuring isotopes to providing radiation protection and security screening for industrial and environmental applications.

Handhound

Radhound Multi-purpose Digital Radiation Meter

A multi-purpose digital radiation survey meter suitable for all your contamination monitoring and radiation protection requirements, the Radhound is a cost effective, feature packed digital radiation monitor that is simple and easy to use.

Count rate is displayed in large clear numbers and also on a bar scale. Our smart averaging software means a steady display that can be read with confidence, yet provides a fast response.

For source finding, one button push changes the display to a histogram plot. Alpha and Beta/Gamma counts can be displayed separately or on the same screen.

For surveying operations the Radhound also has an integrator mode.

- Clear digital LCD display with backlight.
- GM and scintillation detector options.
- Fully adjustable alarm levels.
- Scaler timer function.
- Ergonomic tilt stand.
- Wall mountable.

Radhound X/E and X/I

The Radhound X/E is an advanced hand-held general purpose radiation monitor, suitable for a wide range of probes. The X/I is a Radhound with an internal dose rate detector.

This feature-packed instrument boasts some unique features, such as the ability to switch between probes via the menu allowing, for example, a dose rate probe and a contamination probe to be configured for use with one instrument. This flexibility allows any standard probe to be used (300 - 1200 V).

- Clear digital LCD display with backlight.
- GM and scintillation detector options.
- Fully adjustable alarm levels.
- Multiple probe library/configuration.
- Scaler timer function.
- Peak mode.
- Over range.

SS300 Probe

The SS300 is an uncompensated pancake Geiger-based probe for alpha beta and gamma contamination measurement.

SS315 Probe

The SS315 is functionally identical to the SS300, but with a different probe geometry.

SS330 Probe

The SS330 probe is an excellent general purpose end window compensated pancake Geiger probe with H*(10) energy compensation, which permits reliable measurements from ambient background up to 1 µSv/hr.

SS335 Probe

The SS335 probe is functionally identical to the SS330, but with a different probe geometry.

SS340 Probe

The SS340 is a side-window Geiger probe for ambient gamma radiation measurement to H*(10).

Dose-rate range is 0 - 2 mSv/hr and energy range 45 keV - 2 MeV.

	SS300	S315
Operating Voltage	550 V	
Window	15.5 cm^2 1.6 to 2.0 mg/cm^2 mica	
Measurement Range	0 - 5 kcps	
Plateau Length	150 V	
Temperature Range	-10°C to + 50°C	
Energy Response	20 keV - 2 MeV Gamma, ≥ 40 keV Beta, > 3 MeV Alpha	
Housing Connector	MHV	
Dimensions	∅ 70 x 254 x 64 mm	∅ 70 x 180 mm
Active Area	15.5 cm^2	
Weight	280 g	450 g

Efficiencies (Listed as percentage of 2π emission rate)

Nuclide	Am-241	Pu-238	Nat U	Sr-90/Y-90	C-14	Pm-147	Pu-238	Co-60	Cs-137
Emission	α	α	α	β	β	β	β	β	β
Efficiency	29.1%	26.6%	63.5%	56.7%	19.4%	59.1%	25.8%	36.2%	50.6%

	SS330	SS335	SS340
Operating Voltage	550 V	550 V	450 V
Measurement Range*	0.1 µSv/hr - 1 mSv/hr	0.1 µSv/hr - 1 mSv/hr	0.1 µSv/hr - 1 mSv/hr
Plateau Length	150 V minimum	150 V minimum	200 V minimum
Dead Time	100 µs	100 µs	110 µs
Temperature Range	-10°C to + 50°C	-10°C to + 50°C	-10°C to + 50°C
Gamma Sensitivity	Typically 5 cps/µSv/hr	Typically 5 cps/µSv/hr	Typically 2 cps/µSv/hr
Energy Sensitivity	H*(10) for 20 keV - 1.5 MeV	H*(10) for 20 keV - 1.5 MeV	H*(10) for 45 keV - 1.5 MeV
Housing Connector	MHV	MHV	MHV
Dimensions	∅ 70 x 254 x 64 mm	∅ 70 x 180 mm	∅ 25 x 135 mm
Active Area	15.5 cm^2	15.5 cm^2	40 mm tube length
Weight	300 g	470 g	100 g

* Dose rate probes are set up to read in µSv/hr by default. For measurements in rem/hr, please specify at point of order.

SS404 Al Probe and Be Probe

The SS404 Al is a thin-crystal NaI(Tl) end-window scintillation probe designed to be an equivalent to the Mini 44A.

This probe incorporates a ⌀ 32 x 2.5 mm thick NaI(Tl) crystal mounted on an aluminium window and is fitted with an internal 3.15 mm lead collimator to reduce background counts.

The SS404 Be is similar to the SS404 Al but is fitted with a beryllium window, which extends the low energy response down to 5 keV, making it suitable for counting [55]Fe.

SS500 Probe

The SS500 is a very sensitive end-window gamma scintillation probe.

Equipped with a ⌀ 25.4 x 25.4 mm NaI(Tl) crystal, it is designed to provide a cost effective gamma monitor for energies of 50 keV upwards.

	SS404 Al	SS404 Be	SS500
Operating Voltage	Typically 650 V		
Detector Crystal	⌀ 32 x 2.5 mm NaI		⌀ 25.4 x 25.4 mm NaI
Window Weight			35 mg/cm²
Gamma Sensitivity			300 cps/µSv/hr (^{137}Cs)
Energy Response	15 keV - 250 keV	5 keV - 250 keV	50 keV - 2.0 MeV
Housing Detector	MHV		
Dimensions	⌀ 54 x 185 mm		⌀ 44.5 x 205 mm
Weight	820 g		300 g
Temperature	-10°C to + 50°C		
Humidity			Up to 95% RH non-condensing

Efficiencies (Listed as percentage of 2π emission rate)

Nuclide	Energy	SS404 Al Efficiency	SS404 Be Efficiency
Fe-55	5.9 keV	6.1%	31.4%
Pu-238	16.3 keV	98.7%	99.1%
I-129	31.5 keV	84.9%	91.5%
Am-241	58.8 keV	117.0%	117.3%
Co-57	120 keV	82.7%	83.0%
Cs-137	662 keV	17.0%	18.3%
Co-60	1200 keV	11.4%	12.4%

SS440 B Probe

A beta scintillation probe designed to be an equivalent to the NE BP4.

This probe uses a ⌀ 57 x 1.5 mm scintillator, with an active area of 19.6 cm², and provides comparable sensitivity for beta radiation to anthracene.

A choice of 3 mm, 6 mm and 9 mm grill spacing is available.

Efficiencies
(SS440 9 mm grill, β background 2.9 cps. Listed as percentage of 2π emission rate)

Nuclide	Sr-90/Y-90	C-14	Pm-147	Pu-238	Co-60	Cs-137
Emission	β	β	β	β	β	β
Efficiency	34.8	14.1%	36.1%	15.0%	23.6%	32.3%

SS600 Probes

Equivalent to the NE BP6 / AP2, there are three versions of these 100 cm² window probes available:

- **Alpha only** (Zinc sulphide layer)
  Beta only (Plastic scintillator)
- **Alpha/ Beta** (Zinc sulphide bonded to a plastic scintillator)

The use of a plastic scintillator avoids the traditional use of anthracene in this application, with a comparable response.

Efficiencies
(SS600 Alpha/Beta, α background 1.9 cps, β background 7.5 cps. Listed as percentage of 2π emission rate)

Nuclide	Am-241	Pu-238	Nat U	Sr-90/Y-90	C-14	Pm-147	Pu-238	Co-60	Cs-137
Emission	α	α	α	β	β	β	β	β	β
Efficiency	39.3%	42.0%	43.1	38.4	1.5	36.9	4.7	14.0	28.8

SS700 Probes

A series of three ergonomically balanced probes with a square window of 50 cm² and a 64° angled handle.

Equivalent to the NE BP7, there are three versions available:

- **Alpha only** (Zinc sulphide layer)
- **Beta only** (Plastic scintillator)
- **Alpha/Beta** (Zinc sulphide bonded to a plastic scintillator)

The use of a plastic scintillator avoids the traditional use of anthracene in this application, with a comparable response.

Efficiencies
(SS700 Alpha/Beta, α background 0.7 cps, β background 3.4 cps. Listed as percentage of 2π emission rate)

Nuclide	Am-241	Pu-238	Nat U	Sr-90/Y-90	Cl-36	Co-60	Cs-137
Emission	α	α	α	β	β	β	β
Efficiency	33.0%	32.1%	34.8%	33.9	30.6%	13.2%	23.1%

T401 and T403 Contamination Monitors

Designed to meet the challenge of combining operational reliability with excellent sensitivity the T401 offers a range of features including direct surface, peak and background readings. The T401 can be used one-handed, or detach the probe for two-handed operation.

The T403 is identical to the T401 except that its detector probe is attached to 10 metres of cable, allowing the monitor to be used to survey ceilings, chimneys, behind instruments, and other hard to reach areas.

Both monitors can be supplied with an extension pole kit to securely deploy the detector probe during monitoring operations.

- Dual bar graph meter display 0 - 1000 cps.
- Digital numeric display with automatic direct translation to Bq/cm^2 for 14+ pre-programmed nuclides (natural and man-made) including C-14, P-32, Cs-137.
- Optional extension arm.
- Detachable probe.
- Background reading and storage.
- Audible response with adjustable alarm thresholds.

T402 and T406 Dose Rate and X-ray Monitors

The T402 and T406 are lightweight, yet robust and comfortable to use over extended periods.

- T402 detects gamma and X-rays from 60 keV - 1.33 MeV.
- T406 detects gamma and X-rays from 17 keV - 1.33 MeV.
- Digital bar graph display: 0.1 - 1000 μSv/h.
- Digital dose rate indication: 0 - 10,000 μSv/h.
- Peak dose rate memory – allows maximum exposure levels to be recorded.
- Accumulated dose rate memory – for risk assessment and total exposure.
- Audible response with adjustable alarm thresholds.
- Water-resistant so easy to clean and decontaminate.
- Shock and drop tested so highly durable.

Personal Electronic Dosimeter (PED)

Ideal for users who are not specially trained to measure radiation exposure, the PED family have been specially designed to be easy to use and understand. Encased in weather, shock and drop proof housings each PED features a smooth clean design and simple to use DoseVision™ software.

- Detects X-rays and gamma rays from 33 keV - 1.33 MeV.
- One touch operation.
- Easy to read large Amoled display screen displaying dose rate, accumulated dose and animated silhouette indicating dose received.
- Multiple languages.
- Multiple users.
- Waterproof up to 1 m.

PED-IS

This intrinsically safe PED is perfect for both radiation specialists and those who do not work with radiation every day. Robust and reliable, it is safe to use in potentially explosive areas, making it ideal for challenging environments.

PED Blue

This is the non-intrinsically safe version of the PED-IS. Lighter, it retains the same high quality design and features a direct micro USB connection.

PED+

An advanced version of the PED Blue, it can be used as both a PED and a hand held dose rate survey meter. The PED+ has a number of added features, such as Bluetooth, GPS and pop-up message alarms.

PED+

PED-IS

PED Blue

NORM Monitor-IS

The ultimate tool for obtaining accurate NORM measurements in hazardous areas, the NORM Monitor-IS is ATEX approved with dual probe capabilities; Geiger Müller and scintillator.

- Large, easy to read LCD screen with bar graph and back light.
- One-touch integrate function that allows detection of very low activities for increased measurement accuracy.
- Live background subtraction and several measurement modes.
- Adjustable alarm thresholds for improved safety.
- Easy to clean and decontaminate.

Hidex 300 SL Liquid Scintillation Counter

The Hidex 300 SL is the most advanced and user-friendly liquid scintillation counter available.

Employing Triple to Double Coincidence Ratio (TDCR) counting, the 300 SL provides instant DPM results without the need for any internal or external standards.

It is completely controlled from an external PC and is Windows 10 compatible. With easy to use yet sophisticated MikroWin program, you can store unlimited number of protocols and have automatic data export to Excel or other LIMS. The software also provides options for 21 CFR Part 11 compliance and extensive data reduction features such as quench curve analysis, IC/EC 50 value calculations etc.

- Alpha/Beta separation capability.

Hidex 600 SL Automatic TDCR Liquid Scintillation Counter

Designed to meet the needs of laboratories processing large quantities of samples, the new Hidex 600 SL is a high throughput automatic TDCR liquid scintillation counter.

It uses the robust and unique triple-to-double coincidence ratio (TDCR) counting technology from the successful 300 SL series. Coupled with added sample capacity for up to 500 small vials (or 210 large vials), the 600 SL can process samples at a rate which will satisfy even the most demanding laboratories.

Hidex Triathler

Triathler is a compact and portable single-well instrument that provides instant results for both liquid scintillation and gamma counting.

The Triathler has preset keys for H-3, C-14, I-125, Cs-137, Rn-222 and many others. The on-board memory allows for data storage and export when not connected to a PC. The Triathler's software allows for advanced spectrum analysis, report generation, remote operation, and is Windows 7-or-later compatible.

- Easy to use keypad and LCD readout.
- In-field operation via battery pack or vehicle power adapter.
- Alpha/Beta separation capability.
- Optional external NaI well detector.

Hidex AMG Automatic Gamma Counter

The new Hidex AMG Automatic Gamma Counter is specifically designed to meet the needs of modern Nuclear Medicine, PET and environmental laboratories.

With touchscreen interface and application focused design it guarantees effortless work flow and results simply at your fingertips.

- Sophisticated radiation protection.
- All results, raw data and calculated data are exported directly at the touch of a button.
- Optional features including a sample balance (4 decimal), foot pedal for decay time correction and a barcode reader.
- Automated QC protocol.
- Compatible with vials up to 28 mm diameter.

Handhound Voice Activated Monitor

Designed for use in 'wet-chemistry' radio-isotope handling situations where hands could be contaminated, the mains-operated Handhound voice activated monitor is an ideal solution.

The background is updated whilst the unit is not in use. A proximity sensor ensures the user's hands are underneath the detector, the user then speaks his/her name and says 'continue' to begin the process. The system will then begin counting for a predetermined period which can be set by the supervisor.

A touchscreen interface is also incorporated to allow configuration and manual triggering if needed.

- Entirely voice operated to avoid instrument contamination.
- Sensitive scintillation counter for gamma emitters.
- Automatic background updates.
- Fixed or dynamic alarm thresholds.
- Alternative detector options covering a wide range of nuclides.
- Stainless steel housing for ease of cleaning and decontamination.
- Automatic record keeping against user names, to aid with HSE compliance.
- Touch-screen compatibility included as an alternative to voice operation.
- Data can be downloaded onto USB.

Service and Support

Users of our systems can benefit from our comprehensive, fully inclusive service and support.
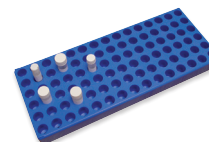
We can give reassurance that if things go wrong or you need expert advice, help is only an e-mail or phone call away.

Related Products

Contamination Control

Scintillation Counting Accessories

Scintillation Cocktails

Shielding and Storage

Waste Disposal Products

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