southern scientific
experience & expertise

Nuclear Medicine

EXPERIENCED SUPPLIERS OF RADIATION MEASURING INSTRUMENTS RANGING FROM PORTABLE MONITORS TO COMPLEX INSTALLATIONS

Based in Henfield, UK, the company has been serving Nuclear Medicine departments since 1984. The Nuclear Medicine and radiation safety ranges of products include single and dual head gamma cameras, dedicated solid-state mobile and cardiac cameras, isotope dose calibrators, lung ventilation products and a wide range of radiation protection instruments.

SERVICE TEAM

Southern Scientific has a team of fully qualified service engineers, who currently 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.

R&D TEAM

It is our policy to provide equipment that offers the very best value in terms of specification, performance, reliability and value. In order to achieve this, we supplement our excellent portfolio of distributed products with a range of instruments designed and manufactured by our development engineers, who work tirelessly to expand the Southern Scientific family of monitoring products. We have the capability for hardware and software design and we will always be pleased to consider special applications.

SYSTEMS SUPPORT

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.

ISO9001:2008

Southern Scientific Ltd is certified to ISO9001:2008, 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.

WEBSITE

Our website contains full details about our company, products and services, as well as downloadable catalogues and datasheets, and up to date news.

tel: +44 (0)1273 497600

CONTENTS

DOSE CALIBRATORS 4
FIDELIS SECONDARY STANDARD 6
BETA COUNTERS 6
RADIO HPLC/TLC DETECTOR 7
CALIBRATOR ACCESSORIES AND PRINTERS 8
THYROID UPTAKE SYSTEMS 10
MIE GAMMA CAMERAS 12
MIE SOFTWARE 14
DIGIRAD SOLID-STATE GAMMA CAMERA 15
DIGIRAD CARDIAC GAMMA CAMERAS 16
DIGIRAD SOFTWARE 17
LUNG VENTILATION EQUIPMENT 18
SENTINEL NODE BIOPSY PROBES 20
PERSONAL DOSIMETERS 21
RADHOUND HAND-HELD RADIATION MONITOR 22
GM, SCINTILLATION AND CONTAMINATION PROBES 24
NEUTRON MONITOR 25
HAND MONITOR 26
CEILING MONITOR 27
LIQUID SCINTILLATION COUNTERS 28
DECONTAMINATION GELS 30
HAND-HELD RADIATION DETECTOR 31

CRC®-25 RANGE

THE ORIGINAL RANGE OF DOSE CALIBRATORS FROM CAPINTEC

With features including USB/PC communications and printer capability, SD flash card software upgrade, a chamber plug-and-play feature and expanded remote capabilities, the CRC®-25 range will continue to be an asset to your department.

A large, easy-to-read display indicates nuclide name, number, activity, unit of measure and calibration number.

There is a custom keyboard including 8 preset, and 5 user-definable keys.

An optional printer is available to print full size records and patient labels for vial and syringe identification.

CRC®-25 PET

- USB/PC Communications
- Automatic zero and background subtraction
- Large character, high visibility display with automatic backlight

CRC®-25W

- Combination of the CRC®-25R Dose Calibrator and the CAPRAC®-R Well Counter
- Capable of measuring a dose as high as 250 GBq with high accuracy
- User-definable protocols for wipe testing

FEATURES

- USB and RS-232 port, with USB printer capability
- SD flash card software upgrade
- Chamber plug-and-play capability
- Interactive intelligent remote display
- Both remote and chamber can be placed 30 meters from the readout unit
- Selection of Nuclide and Daily Test can be done with the remote
- On screen display of nuclide name, number, activity, unit of measure and calibration number
- Large character, high visibility display with automatic backlight
- Over 80 Nuclides with half-lives in memory
  - Automatic zero and background subtraction
  - Built-in dose calibration, quality control and self diagnostics
  - Includes a pre-set key for ^{18}F measurements
- Inventory control
- Dose table calculations
- Newly added linearity protocol
- Radiochromatography QC package
- Built in geometry testing

ALREADY OWN A CRC®-25?

UPGRADE TO THE CRC®-55t RANGE

WHY NOT CONTACT US TO UPGRADE TO THE NEW TOUCH SCREEN CRC-55t

tel: +44 (0)1273 497600

CRC®-55tR

INTRODUCING THE NEW MEASURE FOR DOSE CALIBRATORS

The Capintec CRC®-55tR Dose Calibrator provides the speed and accuracy you need to measure and prepare doses with excellent reliability and performance.

The design includes a menu driven, colour touch screen interface that is easy to learn and use. Capabilities include storage of reference sources in memory that automatically decay correct for today's time and date.

Automated quality control tests and self-diagnostics are built-in with automatic zero and background subtraction making the unit exceptionally easy to use.

An optional printer is available to print records and patient labels with peel off labels for vial and syringe identification.

TOUCH SCREEN

- 8" colour VGA touch screen display with high visibility display and full alpha numeric touchpad
- Optional intelligent programmable remote display

SOFTWARE

- Software upgrade via ethernet interface

NUCLIDES

- On screen display of nuclide name, number, activity, measure and calibration number
- Over 80 nuclides with half-lives in memory

QA

- Built in dose calibration, quality control and self diagnostics
- Automated QC including constancy and linearity programmes

CHAMBER

- Chamber plug and play capability
- Chamber and remote can be placed up to 30 meters from the readout unit
- Optional second chamber

CRC®-55tPET

THE NEW STANDARD FOR FAST, ACCURATE PET ISOTOPE MEASUREMENT

Designed to meet the demands of your department with accuracy and ease of operation.

Reduced chamber pressure and increased bias voltage increases the maximum activity range for high energy PET isotopes.

- Maximum activity of up to 740 GBq of ^{18}F

CRC®-55tW

COMBINATION OF THE 55tR AND WELL COUNTER

The CRC-55tW's dose calibrator provides advanced features with the speed and accuracy you need to measure activity and prepare doses.

- Well counter includes 256 channel MCA with detailed spectrum for ID analysis
- Automated well QC including chi-square, wipe tests and MDA (manual and automatic ROI)
- Lab tests incl. Schillings, blood plasma and RBC volume
- Performs counting functions for wipe tests in as little as 6 seconds at activities as low as 37 Bq.
- Low activities are measured with a drilled well high sensitivity NaI(Tl) detector

SECONDARY STANDARD/NPL FIDELIS

NEXT GENERATION RADIONUCLIDE CALIBRATOR

The Fidelis provides unsurpassed accuracy and traceability, and enables demonstrable compliance with NPL good practice guide.

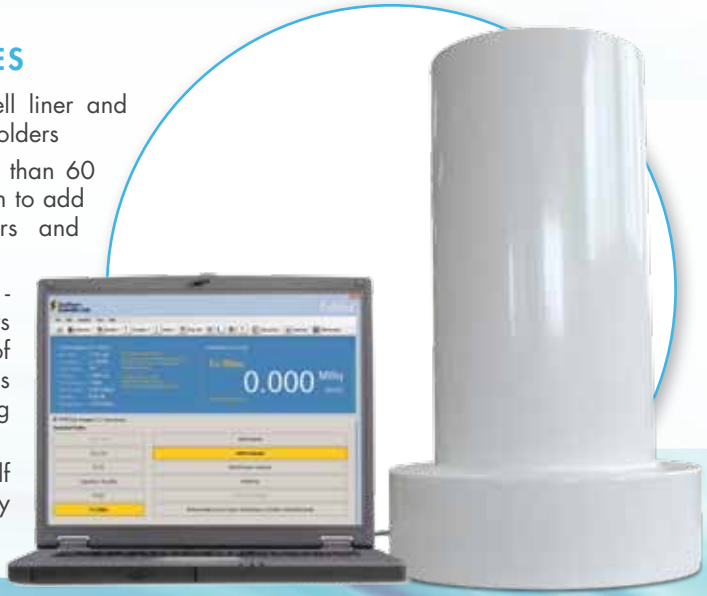
Uses our own high resolution, high linearity 'PAM Electrometer Module', in conjunction with an ionisation chamber.

Well suited for use as a reference instrument - to assay samples for calibrating other radionuclide calibrators, saving money on calibrators and reference sources.

The FIDELIS **fully certified Secondary Standard** ionisation chamber is an identical version of the national standard chamber held at NPL.

FEATURES

- Provided with a well liner and removable sample holders
- Calibrated for more than 60 radionuclides (option to add user defined factors and holders)
- Future proof - Calibration factors for new types of vial or new isotopes can be added using published data.
- Fully automatic self testing and daily checks



SOFTWARE

- Compatible with nuclear medicine management systems (export to Excel etc)
- Software is included (for use on Windows XP or Windows 7), providing a simple to use, unparalleled set of measurement tools

IONISATION CHAMBER	
TYPE	Aluminium alloy, thin wall, deep well, high pressure
WELL DIMENSIONS	370 mm (H) x Ø65 mm
CABLING	1.8 m (6 ft) USB cable
POWER SUPPLY	Mains adaptor (110V available)
GAS	Argon @ IMPa (~10 atmospheres)

NUCLEAR DATA
NPL test each chamber against the master chamber using: ^{241}Am, ^{57}Co, ^{137}Cs, ^{125}I, ^{226}Ra

STANDARD SOURCE DATA
Every unit has provided a 10 MBq ^{137}Cs Standard Test Source

MEASUREMENT RANGE	
TYPE	Auto-ranging high precision PAM module
ACTIVITY	Typ. 0.001 MBq to 75 GBq (for ^{99m}Tc)
RESOLUTION	0.001 MBq (0.01 µCi)
ENERGY RANGE	25 keV to 3 MeV
LINEARITY	+/- 1%. Typical output for ^{99m}Tc 1.25 pA/MBq

CRC®-ULTRA

READOUT UNIT

The comprehensive automated QC includes linearity, geometry and strip tests, and a complete inventory and dispensing module for unit or multi-vial doses.

Features tilting display, user adjustable backlight, easy to read keypad and audible feedback on keypress.

CHAMBER ASSEMBLY

Can combine both 12 and 5 atmosphere PET chambers. Suitable for most BT applications with appropriate source holder.

WELL COUNTER

Six channel fixed MCA featuring auto-calibration for energy and constancy. User-definable wipe test protocols. Schilling, Blood Volume and RBC Volume lab tests. 1.5" NaI(Tl) drilled-well crystal detector.

CRC®-ULTRA WITH BETA COUNTER

The Capintec Beta Detector is available for use alongside the Ultra readout unit.

This option features a thin NaI(Tl) scintillator optimised for Bremsstrahlung sensitivity. Count rate is 50,000 cps (925 GBq - 3.7 Gbqi pure beta emitter) and sample distance is 10-20 cm.

SCAN-RAM™

THE IDEAL INSTRUMENT FOR REAL TIME RADIOCHEMICAL PURITY CHECKS OF PET, SPECT AND HIGH ENERGY BETA RADIOLABELED COMPOUNDS

GLP/CMP COMPLIANCE

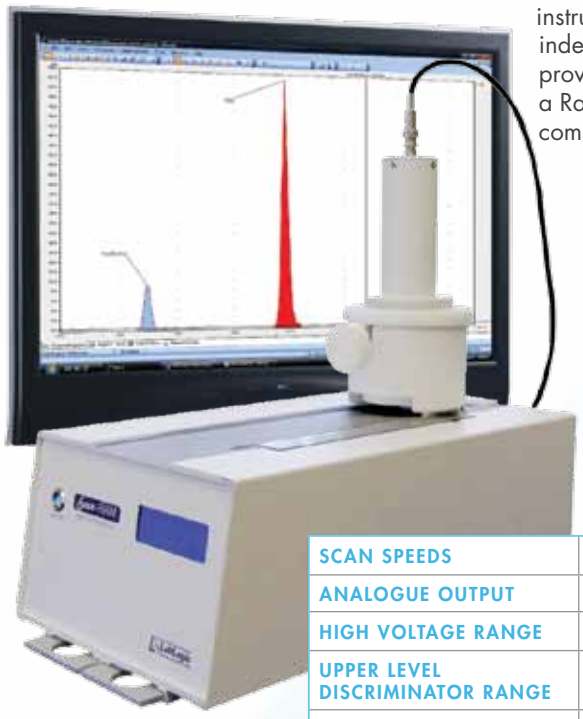
- Controlled through the pocket digital assistant or Laura™
- Features include high voltage, and upper/lower level discriminator
- Your system will always operate within your specified operating parameters

DETECTORS

- Suitable for high and low levels of radioactivity
- Extensive range of NaI(Tl)/PMT, plastic scintillator/PMT, well type NaI(Tl)/PMT and pin diode detectors available

TLC PLATE BEDS

- Easy to clean removable TLC support beds accommodate TLC strips up to 5 x 20 cm



FLEXIBLE

- Dual Scan-RAM configuration: Two detectors can be connected to the same instrument simultaneously **and** independently of one another to provide a Radio TLC scanner and a Radio HPLC detector on the same compact platform
- Ideal for PET and SPECT RCP QC applications

INTELLIGENT FRONT END DISPLAY

- View performance and parameters at a glance

CONNECTIVITY

- The first instrument of its type to offer stand alone control of data collection through a pocket digital assistant via a Bluetooth wireless link
- USB connection for fast control and data collection

SCAN SPEEDS	0.1 - 2.5 mm/sec
ANALOGUE OUTPUT	0 - 1 V
HIGH VOLTAGE RANGE	0 - 2000 V
UPPER LEVEL DISCRIMINATOR RANGE	0 - 4095 mV
INTELLIGENT FRONT END DISPLAY COUNTER INPUT	Two 32 bit counter channels for CMOS level compatible signals
DIGITAL INPUT/OUTPUT	4 digital inputs TTL/CMOS level compatible
SIZE	15 x 38 x 23 cm (D x L x W)
WEIGHT	9.4 kg
POWER REQUIREMENTS	USB (500 mA) and 24 V DC 2 A

CAPRAC-t

- 8" VGA easy to use touch screen colour display
- 256 channel MCA with detailed spectrum for ID analysis
- NaI(Tl) drilled-well crystal detector
- Automatic Energy Calibration, Constancy Check, Background Subtraction, and Well QC including Chi-square and MDA
- Manual and Automatic ROI
- Sets user definable protocols for wipes
- Direct readouts with spectrum display are in cpm, dpm, Ci and Bq
- Lab tests include Plasma and RBC volume
- Built-in database for test and wipe results as well as QC

CHAMBER WELL INSERT

USE BACKUP WELL INSERT AS OTHER DECAYS

Clear tough Plexiglass for improved durability, reduced breakage and longer life. Easily removable for decontamination.

VIAL/SYRINGE SAMPLER HOLDER (DIPPER)

ENSURES PROPER PLACEMENT EVERY TIME

Holds syringes and vials of all sizes. Eliminates the attenuation problems of low-energy gamma emissions that occur with other dippers.

THOMSON COPPER FILTER

FOR USE WITH CAPINTEC DOSE CALIBRATORS

Allows the ^{123}I activity to be measured accurately in a wide range of syringes or vials without the need for a range of lookup correction factors.

REFERENCE STANDARDS

GUARANTEED ACCURACY, HIGH QUALITY & LOW COST

Supplied with certificate of radio-activity calibration that guarantees accuracy within 5%. Can be purchased individually or in cost-effective sets of three or four. Contact us for details.

ENVIRONMENTAL SHIELD

9 INTERLOCKING LEAD RINGS SURROUND CHAMBER

Reduce background radiation more than 10 times. The lead contains 3% antimony for added strength. For use with the CRC®-25R/W & Ultra.

PET SHIELD

NINE SETS OF 6 cm THICK LEAD SPLIT RINGS FOR FULL CHAMBER SHIELDING

The PET shield gives max. radiation protection when working with 511 keV nuclides. It can either be flush mounted to a work surface or mounted on a table or cabinet.

BRACHYTHERAPY RIBBON SOURCE HOLDER: BT-IR-192

POSITIONS ^{192}Ir SEEDS IN DOSE CALIBRATOR

For accurate assays of activity. The coil holds up to 12 ^{192}Ir seeds with 1 cm spacing and no overlap.

BRACHYTHERAPY SOURCE HOLDER: BT-CS-137

POSITIONS ^{137}Cs SEEDS IN DOSE CALIBRATOR

For accurate assays of activity in any Capintec Dose Calibrator. Centimetre markings allow convenient positioning and determination of source length.

MICK-BARD SOURCE HOLDER

DESIGNED TO HOLD SEED CARTRIDGES

Allows cartridges to be properly placed in any Capintec standard length Dose Calibrator chamber for accurate and reproducible measurement.

MOLY ASSAY CANISTER

MEASURES MOLYBDENUM CONTENT OF ^{99M}Tc

For use with all Capintec Dose Calibrators. Includes lead canister and a wire basket to ensure proper placement. Designed to accommodate up to 30 ml without changing parts or settings.

CRC-ULTRA REMOTE DISPLAY

Interactive intelligent remote permits user to switch nuclide, measure bias voltage, zero and background and perform accuracy tests.

OKIDATA PRINTER

FOR USE WITH THE CRC-25R/W

The Okidata MicrolineTM 320i is rated for 5000 hours and offers Near Letter Quality documents plus high-resolution graphics with only 9 pins. Auto paper park lets you switch quickly to/from continuous feed to sheet feed. Easy label insertion and indexing.

EPSON TICKET PRINTER

POSITION INDIVIDUAL TICKETS EASILY

Automatically aligns the label. Although designed for labels, standard paper can be used for daily test results and is printed along one side.

EPSON ROLL PRINTER

COMPACT AND RELIABLE, LONG LIFE PRINTER

This very compact printer has a built-in self-test function to review the printer's condition. An easily accessible ribbon cartridge prints in red or black.

SOUTHERN SCIENTIFIC CALIBRATOR TICKETS

2-PART VIAL LABELS

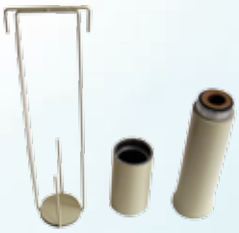
With carbon copy.

Other formats are available, please contact a member of our Sales Team.

CAP-MAC-S®

MOLY ASSAY CANISTER FOR SYRINGES

For use with all Capintec dose calibrators, the CAP-MAC-S® measures ^{99}Mo in ^{99m}Tc unit doses. Accommodates all syringes up to 30 ml without changing parts or settings. The kit has a lead canister and a wire basket to ensure proper placement.



CAP-MAC-2 CANISTER AND T-MAC SYSTEMS

SUPERIOR RADIATION SAFETY FOR GENERATOR AND KIT USERS

Fast, efficient and safe handling of elution vials or radiopharmaceutical kits. The CAP-MAC-2 has a lead vial canister and the T-MAC has a tungsten via canister, both providing exceptional shielding.

Outstanding protection from hand, eye and whole body exposure from handling high activity vials.

- Fits all Capintec CRC Dose Calibrators
- ^{99}Mo and ^{99m}Tc assays with no exposure to unshielded vial
- Accommodates 5 to 20 ml vials
- T-MAC offers smaller, unbreakable canister
- Canisters may be used with Kit vials to store/measure activity without removal from the shield

CALICHECK LINEARITY TEST KIT

PERFORMS LINEARITY IN LESS THAN 10 MINUTES

Accurately simulates decay down to 370 kBq. Results comparable to standard linearity tests. 7 colour-coded lead-wrapped tubes allows for accurate testing, each with their own storage container and record-keeping sheets.

CALICHECK LONG LINEARITY TEST KIT

5" LONGER THAN THE ORIGINAL KIT

Extended reach designed for use in counter sunk dose calibrators, making inserting and retrieving each tube very easy. Storage container and instructions included.

CAPTUS® 700t

THYROID UPTAKE SYSTEM FEATURING A TOUCH SCREEN INTERFACE

With the Captus® 700t Thyroid Uptake System, performing thyroid uptake measurements has never been easier, featuring a new colour touch screen interface with menu driven keys.

Multiple TU protocols can be established utilizing ^{123}I, ^{131}I or ^{99m}Tc. The protocols can use a standard capsule method or allow the system to perform an automatic decay correction to the administered dose.

MULTICHANNEL ANALYSER

- 512 Channels
- Automatic self-calibration. Linearity within 2% full scale. Differential Linearity 2% SD.
  A to D conversion time is 10 microseconds
- Low Energy Discrimination level
- Automatic or manual ROI's
- Background subtraction and mean energy calculation via curve fittings
- Max. count rate 100,000 cps (real time)
- Automatic or manual linear display

MEMORY & REPORTING

- Over 90 nuclides in memory
- Detailed patient demographics, physician data and administered dose data stored
- Unlimited uptakes can be performed. Results are reported with detailed count information and automatic percentage uptake calculations

SOFTWARE

- Fast, dedicated modules for Thyroid Uptake, Wipe Tests, Bio-Assay, Blood Volume, and RBC Survival.
- Blood Volume section offers ^{125}I and ^{51}Cr methods with guidance through the counting procedure and automatic calculation of results
- Bioassay for Staff allows counting of personnel with only one neck count

QA

- Constancy, Chi Square, MDA and resolution functions are all easy to perform
- System calibration is simple and automatic with the use of ^{137}Cs, or use ^{152}Eu for enhanced point to point spectral energy

STAND

- Rugged floor stand with spring arm and shelves
- Heavy duty locking casters
- Base designed to hold well detector

MCA	512 channels	
COUNT RATE	100,000 cps (real time)	
ROI'S	Automatic or Manual	
LINEARITY	DIFFERENTIAL	<2% SD
	INTEGRAL	<2%
PRESETS	Live time, real time or total counts	
DETECTORS	Two 2" NaI(Tl)	

COLLIMATION	Optional Paediatric/Bioassay collimator	
WELL	Ø1.6 x 4 (d) x 2.5 (lead) cm Ø1.6 x 4 (d) x 5 (lead) cm (Lined with brass to minimise backscatter)	
CALIBRATION SOURCES	^{137}Cs and ^{152}Eu (calibrated exempt sources provided at no charge)	
POWER REQUIREMENTS	STANDARD	115 V, 25A, 90-127 V, 50-60 Hz
	OPTIONAL	220 V, 25A, 180-250 V, 50-60 Hz (with circuit protections, line filter and isolation transformer)

OPTIONAL ACCESSORIES

A RANGE OF ACCESSORIES ARE AVAILABLE INCLUDING WIPE SPOT PADS, TEST TUBES FOR WIPE SAMPLES, TABLE TOP STAND, NECK PHANTOM, WELL DETECTOR, WALL MOUNT STAND AND DRILLED WELL CRYSTAL.

PLEASE CONTACT A MEMBER OF OUR SALES TEAM FOR MORE INFORMATION

A LabLogic Company

tel: +44 (0)1273 497600

CAPTUS® 3000

PORTABLE THYROID UPTAKE MEASUREMENT HAS NEVER BEEN EASIER

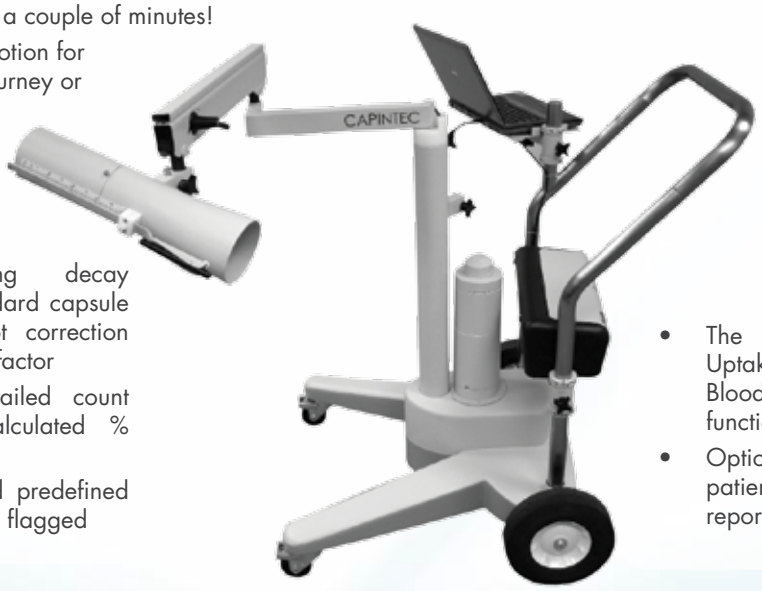
The lightweight portable Captus® 3000 combines a software program with the latest PC technology to create a Thyroid Uptake system that is fast, reliable, and extremely easy to use.

PORTABLE VERSATILE SYSTEM

- Easy to move and position, with lockable wheels and tip proof design for patient and operator safety
- Foldable and can also be quickly disassembled into four lightweight sections for easy handling and transport
- Reassembly takes just a couple of minutes!
- Enhanced range of motion for patients on a chair, gurney or standing

MULTICHANNEL ANALYSER

- 1024 channel user friendly Multichannel Analyser provides automatic and manual ROI selection, ability to use stored auto-calibration setup, or manually adjust zero, gain and voltage
- Spectra can be saved and retrieved for comparison. Over 90 Isotopes are included
- All MCA adjustments are software controlled



THYROID UPTAKE

- Provides flexible protocols, including decay corrected dose, standard capsule measurement, aliquot correction and multiple capsule factor
- Reports include detailed count information and calculated % uptake
- Results which exceed predefined normal ranges will be flagged

SOFTWARE

- The Captus® 3000 system comes complete with a laptop and printer, with the software pre-loaded
- The software features Thyroid Uptake, Wipe Testing, Bioassay, Blood Volume and RBC Survival functionality built in
- Optional Dicom interface pulls patient information and send reports back to PACS

QA

- Fully automated QA program using ^{137}Cs and ^{152}Eu rod sources provided with system
- QA includes full system calibration, zero offset, energy resolution, energy linearity, efficiency calculations, constancy, chi-squared and MDA functions

MCA	1024 channels	
COUNT RATE	100,000 cps (max)	
ROI'S	Automatic or Manual	
LINEARITY	DIFFERENTIAL	<2% over the top 98% of channels
	INTEGRAL	<1% over the top 98% of channels
PRESETS	Live time, real time or total counts	
PEAK-FINDING	Automatic	
DETECTORS	Two 2" NaI(Tl)	
COLLIMATION	Flat field to meet ANSI N44.3-1973	
WELL	Drilled with 1" lead shielding (optional 2" shielding available) and brass liner	
CALIBRATION SOURCES	^{137}Cs and ^{152}Eu (calibrated exempt sources provided at no charge)	
POWER REQUIREMENTS	STANDARD	115 V 90-127 V 50-60 Hz
	OPTIONAL	220 V 180-250 V 50-60 Hz
WEIGHT	120 lbs / 55 kg (without well counter)	

IT'S WHAT'S ON THE INSIDE THAT COUNTS!

MiE GAMMA CAMERAS

WE PROVIDE A WIDE RANGE OF GAMMA CAMERAS DESIGNED TO MEET SPECIFIC CLINICAL NEEDS

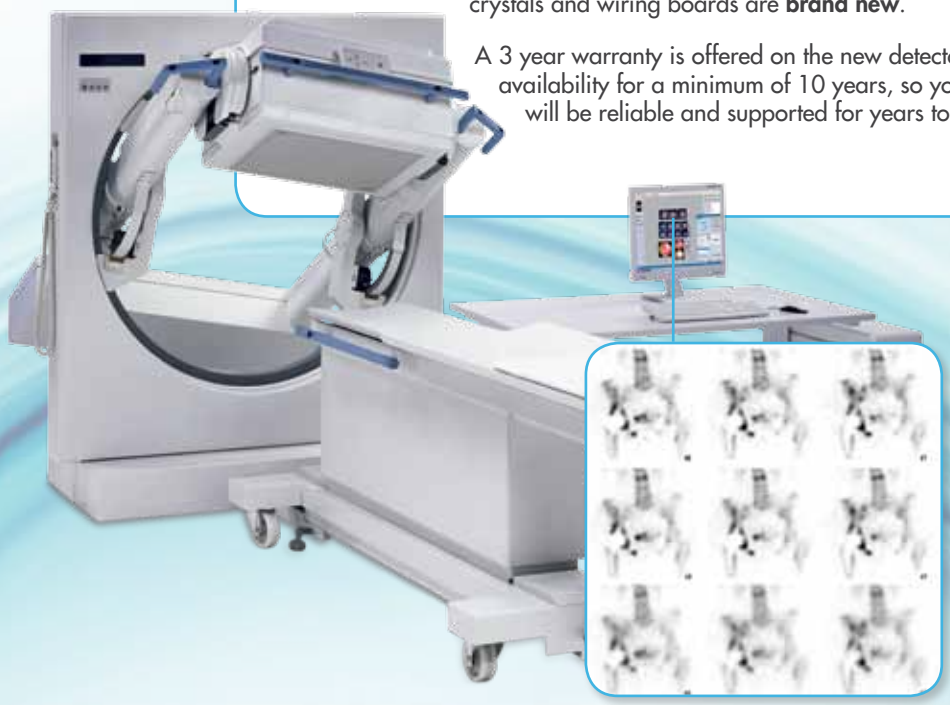
A NEW GAMMA CAMERA AT A FRACTION OF THE COST

Drawing on over 35 years of manufacturing experience, MiE have developed a system of remanufacturing to deliver cost effective imaging solutions you can rely on.

Remanufacturing is an economical and ecological approach to gamma camera manufacture, closing the gap between shortened development cycles and more durable mechanics and electronics.

It is important to understand these cameras are not recycled or second hand. Whilst MiE are utilising pre-existing gamma camera frames which meet their strict quality standards criteria, the detector crystals and wiring boards are **brand new**.

A 3 year warranty is offered on the new detector crystals, and MiE guarantee parts availability for a minimum of 10 years, so you can feel assured that your camera will be reliable and supported for years to come.



MiE GAMMA CAMERA SOFTWARE

ALL MiE CAMERAS COME PRE-LOADED WITH THE LATEST SCINTRON® SOFTWARE

SEE PAGE 14

DIACAM® SCINTRON®

FOR STATIC, DYNAMIC, GATED AND WHOLE BODY STUDIES

- The DIACAM® features a rectangular detector for all static, dynamic and gated studies as well as Whole Body and SPECT imaging
- Large Field of View
- Patient imaging table provided as standard with system
- ZLC® energy and linearity correction for inherent energy variations, non-linearity in count rate and energy spectra even during acquisition of data

ECAM2® SCINTRON® GAMMA CAMERA

A DUAL HEAD GAMMA CAMERA SYSTEM DESIGNED FOR SPECT, WHOLE BODY AND PLANAR IMAGING

The design, featuring two large rectangular detectors optimised for high quality in all energy acquisition, permits caudal, cephalic and external rotation versatility, with a variable angle model offering 90° - 180° configurability.

COLLIMATORS

- A comprehensive selection of collimators for general and specialised applications are available

BODYCONTOURING

- Real-time infrared bodycontour system minimises patient-to-detector distance for all whole body and SPECT studies

FIELD OF VIEW

533 x 387 mm / 21″ x 15.25″
with 59 high efficiency PMT's

PATIENT HANDLING SYSTEM

- Motorised patient handling system lowers to 48.3 cm for convenient patient access
- 2.5 mm ultra thin imaging pallet improves image resolution for all procedures for patients up to 180 kg (400 lbs)

CONNECTIVITY

- Network ready communication and printing capabilities allow for smooth connectivity with HIS/RIS and PACS

GANTRY DESIGN

- Versatile and compact pass-through open gantry allows for high patient throughput

DETECTORS	2 large rectangular detectors New sodium iodide crystals, 9.5 mm / 0.38″ thickness
FOV	533 x 387 mm / 21″ x 15.25″
PMT'S	59 high efficiency PMT's for each detector Automatic PMT tuning
ROTATION ANGLE	Caudal, cephalic and external rotation with variable angle model offering 90° to 180° configurability
IMAGING PALLET	2.5 mm / 0.1″ ultra thin imaging pallet
PATIENT WEIGHT CAPACITY	400 lbs / 180 kg
PATIENT ACCESS	Motorised system lowers to 483 mm / 19″ for convenient patient access

MIE SOFTWARE

ALL MIE GAMMA CAMERAS ARE LINKED TO A SCINTRON® 7 WORKSTATION FOR DATA ACQUISITION, IMAGE PROCESSING AND DISPLAY AND DATA ARCHIVE

POWERFUL INTUITIVE SYSTEM

- Scintron® 7 provides a system that is easy and intuitive to use and has been designed to allow reproducible analysis
- Provides quick and simple adaptation of acquisition protocols ensuring that examinations can be tailored to individual patient requirements
- Can link to any patient information system to enable work-lists to be displayed and prevent error from manual input of patient

SCINTRON® 7 ALSO INCLUDES:

- Extensive image manipulation tools including smoothing, filtering, interpolation and zoom
- Multiple ROI tool as well as left/right comparison and ratios
- Quick intuitive analysis for SPECT and cardiac work
- Thyroid Uptake analysis programme
- Renal analysis programmes for static and dynamic studies
- On-the-fly sequence display for dynamic studies

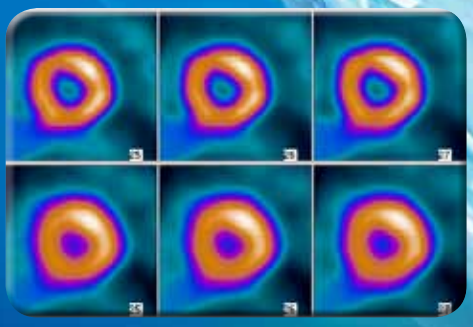
DROSEM RECONSTRUCTION SOFTWARE

DEPTH RESPONSE ORDERED SUBSETS EXPECTATION MAXIMISATION

The DROSEM reconstruction algorithm allows a refined model of the real SPECT image, taking into account depth dependent detector response and attenuation correction.

- Significant quality improvement compared to conventional reconstructions
- Shortened scan time
- High quality images even with poor acquisition statistics
- Improved signal to noise ratio
- Uncomplicated integration in the MiE ECT programme via license activation
- Reconstruction of any SPECT studies by DICOM import possible

DROSEM



FBP (Filtered Back Projection)

THE BENEFITS OF SHORTER ACQUISITION TIME INCLUDE:

- Efficiency through high patient throughput and cost optimisation
- Improved patient comfort
- Better image quality by significantly reduced motion artifacts

tel: +44 (0)1273 497600

A VARIETY OF OPTIONAL RADIOLUCENT IMAGING TABLES AND STOOLS ARE AVAILABLE

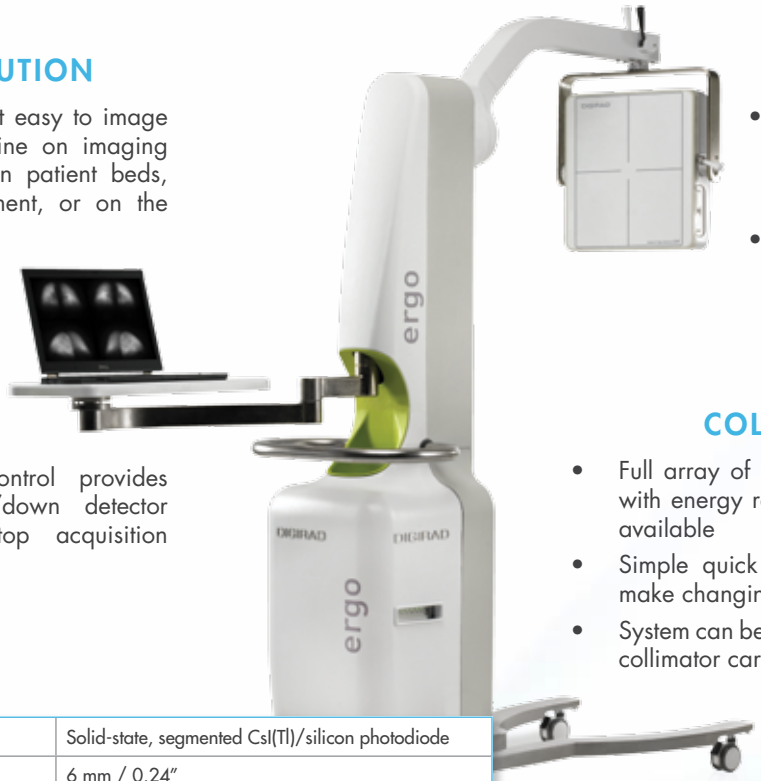
ERGO

SOLID-STATE IMAGING SYSTEM

Utilising powerful new solid state technology, the ERGO is a large field of view camera that provides unprecedented image quality and unparalleled clinical flexibility both in the department and on the ward.

FLEXIBLE SOLUTION

- Open design makes it easy to image patients erect or supine on imaging tables, stretchers or in patient beds, either in the department, or on the ward
- Multiple compound motions, long 36"/ 91.4 cm reach and portable base enhance clinical flexibility and efficiency
- Detachable hand control provides variable speed up/down detector motion and start/stop acquisition functionality



PORTABLE

- The unit has been designed to be portable and features a convenient storage area
- Onboard UPS system provides 30 mins of power in case of AC power interruption and for transport to bedside

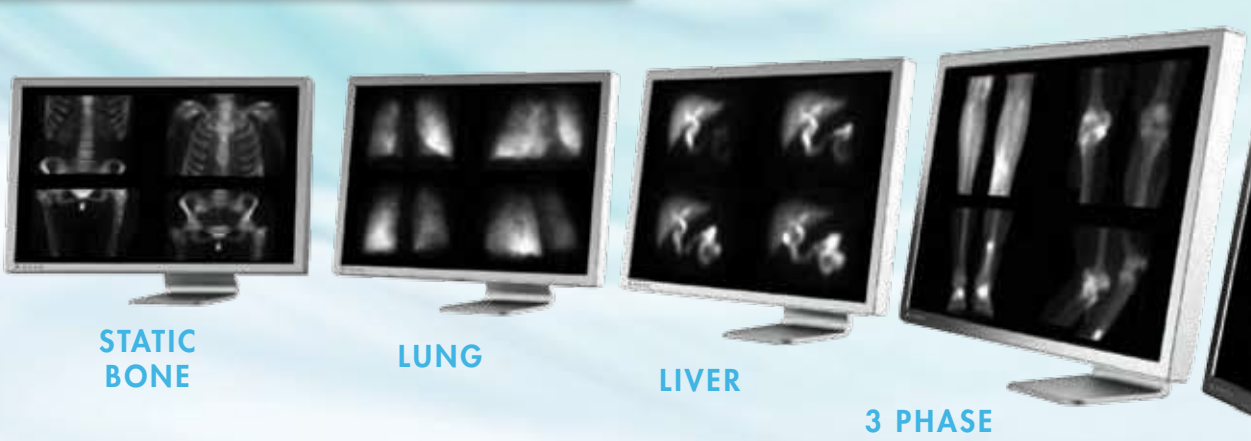
COLLIMATORS

- Full array of easy to change collimators with energy ranges from 50 to 350 keV available
- Simple quick release latch mechanisms make changing collimators easy and fast
- System can be provided with a convenient collimator cart

DETECTOR	Solid-state, segmented CsI(Tl)/silicon photodiode
CRYSTAL	6 mm / 0.24"
USEFUL FOV	396 x 311 mm / 15.6" x 12.2"
ENERGY RANGE	50 - 350 keV
INTRINSIC SPATIAL RESOLUTION	3.3 mm
INTRINSIC ENERGY RESOLUTION	FWHM, 140 keV (%) 7.9
INTRINSIC SPATIAL LINEARITY	0.3 mm (absolute)
ENERGY RESOLUTION	7.9%
COUNT RATE CAPABILITY	5 Mcps
HIGH COUNT FLOOD FIELD UNIFORMITY	<2.5% differential <3.5% integral
SYSTEM WEIGHT	438 lbs / 198.7 kgs
SYSTEM DIMENSIONS	179 (H) x 74 (W) x 170 (L) cm / 70.5" x 29" x 67"

ACQUISITION CONSOLE

- Laptop based acquisition workstation mounted to a swivel base makes it possible to operate the system from either side of the camera
- Control console provides comprehensive acquisition and viewing functionality, and supports DICOM 3.0 and Modality Worklist functionality



NO LEAD-LINED ROOM REQUIRED

CARDIUS x•act

FULLY INTEGRATED SPECT•VCT IMAGING SYSTEM

A fully integrated SPECT•VCT approach that offers superb quality, high speed and unmatched clinical precision.

The x•act high-speed solid-state detectors have the ability to collect both the emission and the CT transmission data, eliminating the need to move the patient between the data collections.

FEATURES

- Dedicated triple headed camera with solid state detectors
- Attenuation correction uses mono-energetic fluorescent X-ray line source with additional patient dose of around 5 µSv
- Compact system fits into a room as small as 2.4 x 2.7 m/ 8 x 9 ft

LIGHTWEIGHT, OPEN UPRIGHT SYSTEM DESIGN

OPEN DESIGN AND WIDE ORBIT RADIUS ENABLES IMAGING OF CLAUSTROPHOBIC, COPD AND BARIATRIC PATIENTS UP TO 227 KGS /500 LBS

- Upright imaging gives greater separation of heart from liver, gallbladder and bowel, significantly reducing artifact from overlying activity
- Small detector size ensures it is possible to bring the detectors tight to the patient, providing consistent high quality results, regardless of patient size
- Saddle-like seat provides passive resistance to sliding, minimising patient motion
- Attenuation correction utilises same detector heads with no movement of patient between emission and transmission leading to excellent image co-registration

DETECTOR	Solid-state
CRYSTAL	CsI(Tl) / Photodiode
FOV	158 x 212 mm / 6.2" x 8.3"
ENERGY RANGE	50 - 170 keV
ENERGY RESOLUTION	<10.5%
SENSITIVITY	160 cpm (LEHR)
SYSTEM WEIGHT	370 kg / 815 lbs
SYSTEM DIMENSIONS	96" x 29" Operator console: 28.75" x 33"
MIN. ROOM SIZE	8 x 9 feet

CARDIUS 3 XPO

UP TO 38% IMAGING ACQUISITION EFFICIENCY ADVANTAGE OVER OTHER INDUSTRY-LEADING CAMERAS WHILE MAINTAINING COMPARABLE IMAGE QUALITY.

FEATURES

- Can perform a 7 minute stress acquisition study
- High quality, consistent and reliable HDSD solid-state detectors
- Open and upright, with the ability to image patients up to 500 lbs
- Compact and lightweight, requiring a room size of just 7' x 8'

tel: +44 (0)1273 497600

SEEQUANTA™ SOFTWARE WITH TruACQ™

STATE OF THE ART ACQUISITION SOFTWARE FROM DIGIRAD

Revolutionary nuclear medicine acquisition software with heavy emphasis on nuclear cardiology.

SeeQuanta™ software combines an advanced user interface with patent pending cardiac tools resulting in unique patient independent imaging capability. This innovative introduction demonstrates enhanced workflow and increased flexibility with high throughput.

WITH ITS FOCUS ON NUCLEAR CARDIOLOGY, THIS SOFTWARE WAS DESIGNED WITH KEY BENEFITS & FEATURES IN MIND:

FAST & EASY ACQUISITION SETUP, EASY PULL DOWN MENUS

- Pull-down menu for dedicated cardiac protocols
- Seamless database access
- Automated post acquisition displays (cine or frame mode)
- Bi-directional acquisition setup

OPTIMISED IMAGING WITH INTEGRATED QUALITY CONTROL

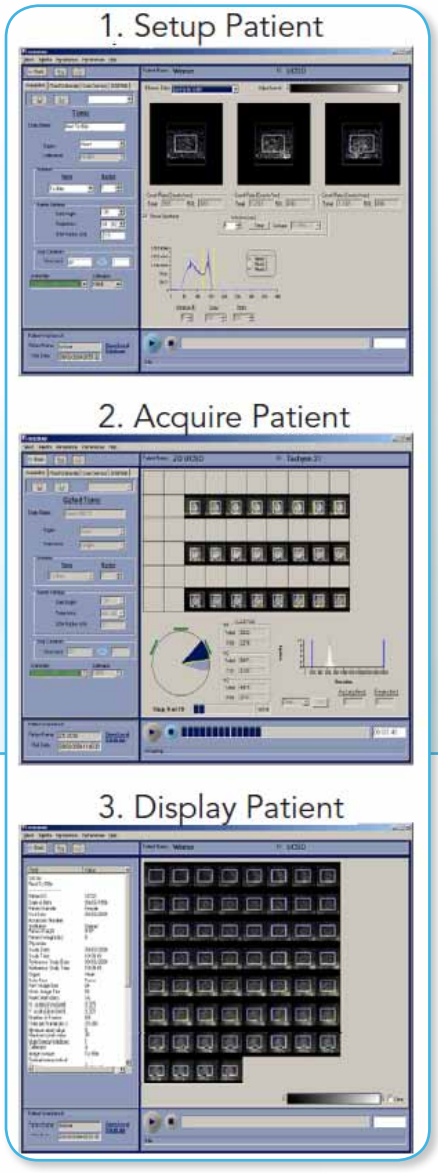
- Error fields indicating missing or inaccurate information
- Automatic display post acquisition

ENHANCED WORKFLOW WITH WINDOWS .NET TECHNOLOGY

- Intuitive one click acquisition workflow
- Simultaneous acquisition and processing capability
- Single, dual or triple p-scope display screens

PATIENT INDEPENDENT CARDIAC IMAGING WITH REVOLUTIONARY TOOLS

- Patent pending TruACQ™ technology with ability to recommend patient specific acquisition times
- Count rate capability within an ROI and entire frame
- Count density information from the heart after each acquired frame
- Sequential acquisition display mode with ROI overlay over the heart optimising the ability to detect patient motion



PROCESSING SOFTWARE

Digirad's processing software ensures quick and easy processing from optimum image quality and reconstruction

STAYSIS MOTION CORRECTION:

Automatically corrects for any motion within the scan

COREGISTRATION SOFTWARE

Allows the user to check fusion of emission and transmission images and reposition the heart as necessary

x•act PROCESSING

Allows for image display, with tools such as reorientation, rotation, filter functions

Automatic or manual loading of patient data as required

System available with Cedars Sinai QGS/QPS and/or Corridor 4DM as required

nSPEED™

3D OSEM RAPID IMAGE ACQUISITION CLEARER IMAGES IN LESS TIME

nSPEED™, a 3D-OSEM reconstruction software option from Digirad, provides superior image quality over existing 2D reconstruction techniques, producing sharper, higher contrast images.

nSPEED™ models the depth-dependent point response function in an iterative reconstruction algorithm (OSEM), enabling depth-dependent resolution recovery and improving chamber contrast in cardiac SPECT images.

Due to the significantly improved image resolution provided by use of nSPEED™ acquisition time or patient dose may be reduced whilst maintaining image quality as compared to conventional reconstruction methods.

SWIRLER

AEROSOL DRUG DELIVERY SYSTEM

"PRECISELY ALVEOLAR"

The Swirler's patented air-flow design utilizes shear forces to create efficient atomization.

This technology increases the delivery of droplets having the desired size (0.5 to 1.5 microns) to assure a more rapid coating of the alveoli.

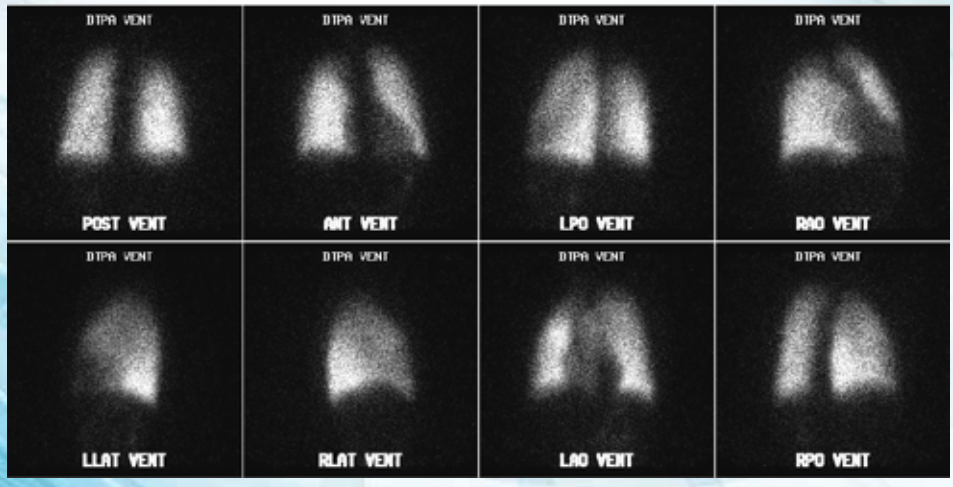
The Swirler can easily accommodate a ventilator-assisted patient by inserting the Swirler between the endotracheal device and the ventilator "Y" connectors.

The Swirler UltraShield® is an injection moulded Tungsten formulation to conform to the shape of the Swirler Aerosol System. This new material and process makes the combination light in weight while maintaining Lead Equivalent shielding.

EASY... SAFE...THE SWIRLER GUARANTEES IT

- Inexpensive
- Efficient
- Convenient
- Economical
- Disposable
- Easy to Use

VENTILATION IMAGE ACQUIRED USING THE SWIRLER SYSTEM



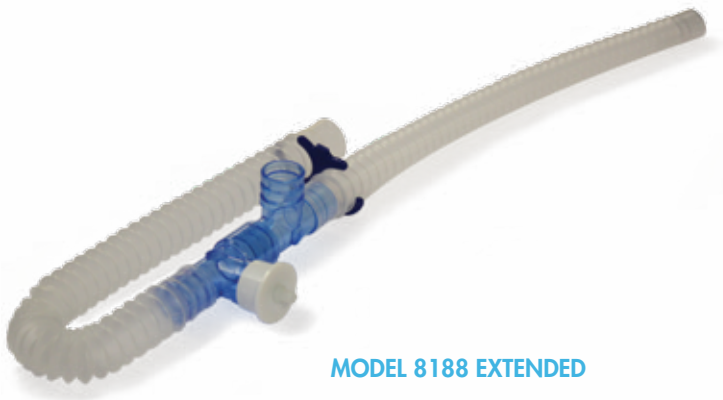
tel: +44 (0)1273 497600

ACCESSORIES AVAILABLE SEPARATELY

AMICI NP KRYPTON 81M

DELIVERY CIRCUITS AND ACCESSORIES

MODEL 8188



MODEL 8188 EXTENDED

Krypton 81m is most efficiently delivered using a reservoir system (JNM 1983: 24). This NP Krypton 81m Delivery System has been designed by City Hospital, Birmingham.

These easy to use, single use systems ensure quick, efficient krypton delivery to the patient.

The standard system (pictured above) is supplied in boxes of 50. Each box includes 10 thin bore delivery tubes. Also available are complete systems with a mouthpiece and nose-clip, or with a medium adult mask.

MODEL 8189

MODEL 8191

If the kits do not reflect your own preferences, these accessories can be purchased separately and may be used with the standard circuit, model 8188.

5070	Large Adult Mask	Box of 20
5071	Adult Mask	Box of 20
5072	Small Adult Mask	Box of 20
0142	TRU-FIT Mouthpiece and Nose-clip	Box of 20
1604	Disposable Mask Harness	Box of 20
LC2	Air Pump (as recommended by supplier of Krypton Generators)	Box of 1
	Remote switch for Air Pump	Box of 1

C-TRAK® GALAXY

GAMMA PROBE SYSTEM

The C-Trak® Galaxy system is an instrument that provides an accurate guide for surgeons during sentinel node surgery.

Designed following extensive feedback from physicians and radiation physicists, C-Trak Galaxy® has a high visibility, colour touch screen interface that offers multiple ways of displaying information on the amount of radiation detected.

The system incorporates a new method (patent pending) for removing background radiation that allows for auto-ranging and unprecedented ease at finding sentinel nodes.

INTERFACE

- High visibility colour display
- Powerful, easy to use touchscreen interface
- Multiple ways of displaying information about amounts of radiation detected
- Built-in help and instructional videos are available through the interface

CALIBRATION

- Super-fast new calibration and enhanced diagnostics quickly ensure the system is functioning optimally

MEMORY

- Stores and displays timed counts with customisable interface (patent pending)

SENTINEL NODE BIOPSY

- New method for removing background radiation (patent pending) allows for both autoranging and unprecedented ease at finding sentinel nodes

STAND

- Tilt stand with quick release makes system very easy to set up and take down

OPTIONAL EXTRAS

- Printer to enable efficient record keeping
- Cart to store all system components

BACK BY POPULAR DEMAND!

C-TRAK® PROBES AND COLLIMATORS

- OmniProbe® Collimators with 6.86 mm and 5.08 mm openings
- OmniProbe® E/L Laparoscopic
- OmniProbe® PET
- OmniProbe® Indium
- OmniProbe® Thoracic

ALREADY OWN A CW 3000?

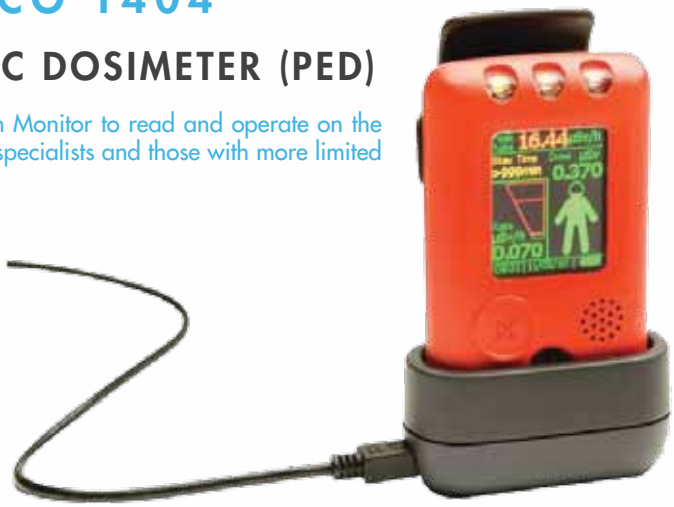
WHY NOT UPGRADE TO THE TOUCH SCREEN C-TRAK® GALAXY, ALL EXISTING PROBES ARE COMPATIBLE

OTHER MODELS AVAILABLE CONTACT US FOR DETAILS

TRACERCO T404

PERSONAL ELECTRONIC DOSIMETER (PED)

TRACERCO™ PED is the easiest Peronsal Radiation Monitor to read and operate on the market, making it the perfect choice for both radiation specialists and those with more limited experience.



FEATURES

- Simple to use with Amoled display, large icons and one touch operation
- Lightweight, weatherproof and drop resistant design
- Extra large memory reducing the risk of data being overwritten
- Three measurement modes and four alarm settings
- Wear it several ways as the screen can be flipped
- Supplied with DoseVision™ Software interface

DOSERAE II

SOLID-STATE DOSIMETER FOR A HUGE RANGE OF X-RAY AND GAMMA APPLICATIONS

The DoseRAE II makes use of both a PIN diode and CsI crystal to provide a fast responding doserate display, ensuring users can react quickly in dangerous scenarios.

Wide dose rate range H*(10): 10 µSv/hr - 10 Sv/hr

Broad energy range: 20 keV - 6 MeV

Accountability: Onboard memory for up to 3,000 measurements

Long life: 200 hours operation between battery charges

Discrete: Small unit, weighing less than 50 g

Standard package includes: Charging cradle, USB connector and ProRAE Configuration and Data Management software

THIS HIGH SPEC INSTRUMENT IS IDEAL FOR USE AS PART OF A COMPLETE DOSIMETRY SYSTEM FOR A LOW RELATIVE COST.

MYDOSE PERSONAL DOSIMETERS

ALOKA'S RANGE OF ELECTRONIC PERSONAL DOSIMETERS ARE SMALL AND SIMPLE

Weighing only 55 g, they can be worn comfortably and discreetly in order to monitor both dose rate and accumulated dose.

The internal solid state detector provides sensitivity to low energies, whilst the lithium battery can operate for up to 700 hours on a single charge. Four different models offer a range of specifications, depending on requirement.

EPD	Dose Rate Range (H*10)	Accuracy	Energy Threshold	Energy Dependence	Alarm Function
PDM-122	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 10 Sv	40 keV	±30% for 50 keV - 1.5 MeV	No
PDM-127	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 1 Sv	20 keV	±30% for 30 - 200 keV	No
PDM-222	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 10 Sv	40 keV	±30% for 50 keV - 1.5 MeV	Yes
PDM-227	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 1 Sv	20 keV	±30% for 30 - 200 keV	Yes

DEVELOPED BY SOUTHERN SCIENTIFIC

RADHOUND

OUR SIMPLE YET VERSATILE DIGITAL RATE-METER

The Radhound bench-top monitor and Radhound X portable monitor are powerful, general purpose ratemeters, suitable for use by anyone, from professional health physicists to basic users.

They are currently finding use within a large range of sectors, including the nuclear medicine and X-Ray departments in hospitals, nuclear industry, research facilities and NDT labs.

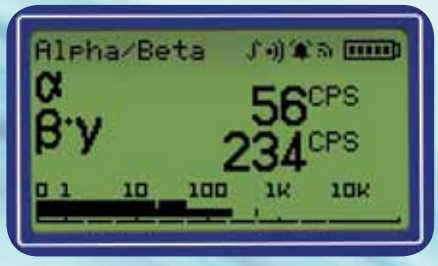
Our broad selection of Geiger, NaI(Tl) and plastic scintillator based probes covers the whole spectrum of contamination and dose rate measurement requirements (SEE P24).

APPLICATIONS

- Nuclear medicine departments, suitable for ^{125}I, ^{99m}Tc etc.
- For contamination monitoring on surfaces, clothing and objects
- Radiological survey work and lab use
- Emergency planning, response and clean up
- Research applications
- Area dose rate monitoring

SOURCE FINDER SCREEN

INTEGRATOR SCREEN



ALPHA/BETA-GAMMA SCREEN

ERGONOMIC

Light weight, supported by adjustable tilt stand. Big buttons for use with gloves. LCD display is bright and clear, with large characters and a motion-sensitive backlight.

VERSATILE

Suitable for bench-top use, mobile applications and for wall-mounting, using the tilt-stand base plate.

POWERED

Runs on an internal rechargeable lithium-ion cell, giving over 12 hours use, or directly from the AC charger for installed or static use. A battery level indication is given on screen.

COMMON FEATURES

SIMPLE OPERATION

Single button toggling between modes and an easily navigable menu, which can be locked to protect user settings.

DATA TRANSFER

Connection to PC via infrared or wired link, for the real time transfer of measurements.

OVER RANGE

Message displayed in case of saturation, supported by active foldback protection.

SCALER TIMER

Scaler timer mode allows the integration of count for a preset time (or time to a preset count). Additionally in dose rate mode, time to dose can be indicated.

ALARM

Loud, audible tone suitable for use in active environments. Fully adjustable alarm thresholds, with separate settings for alpha and beta. Visual alarm indicated by flashing symbol.

SELF TEST

Integrity check is performed on start-up, covering battery, keyboard, menu configuration and high voltage.

SMART AVERAGING

Can be configured to slow, medium or fast depending on user preference. Averaging time scales automatically within these ranges to provide a steady, yet reliable reading.

ADVANCED USER MODE

Edit and lock device and probe settings in the fully configurable advanced menus

UNIQUE RADHOUND X FEATURES

INTERNAL GM

Integrated Geiger tube, compensated to H*(10), for probe-free surveying in the field.

SCA MODE

Upper and lower discriminations can be set for specific energy measurements.

BATTERY

Runs from two standard C-cells or an internal rechargeable lithium-ion cell, as in the Radhound.

BALANCED

Comfortable to hold, carry and operate for extended periods.

ACCESSIBLE

Probe calibration can be performed entirely from the advanced menu, without needing to remove the case

MULTI-PROBE

The Radhound X can be set up for use with multiple external probes. Changing the calibration is as simple as selecting the relevant entry from a list of pre-configured detectors.

RUGGED

Tough steel case, waterproof to IP65 for weather resistance and safe decontamination. Impact resistant polymer ends allow the Radhound X to stand up to the rigours of daily use.

DEVELOPED BY SOUTHERN SCIENTIFIC

CONTAMINATION PROBES

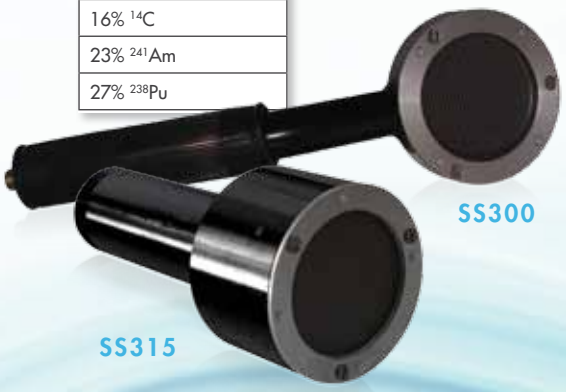
SS300 AND SS315 PANCAKE GEIGER PROBES

The SS300 is an uncompensated pancake (550V) Geiger based probe for alpha, beta and gamma contamination measurement. The SS315 is functionally identical, but with a different probe geomtery.

TYP. EFFICIENCIES
45% ^{137}Cs
33% ^{60}Co
50% ^{90}Sr-^{90}Y
16% ^{14}C
23% ^{241}Am
27% ^{238}Pu

EFFICIENCIES

Listed as percentage of 4pi emission rate from Ø44.5 - 50.8 mm source.



	SS300	SS315
OPERATING VOLTAGE	550 V	550 V
WINDOW	15.5 cm² 1.6 to 2.0 mg/cm² mica	15.5 cm² 1.6 to 2.0 mg/cm² mica
MEASUREMENT RANGE	0 - 5 kcps	0 - 5 kcps
PLATEAU LENGTH	150 V	150 V
TEMPERATURE RANGE	-10° to +50°C	-10° to +50°C
ENERGY RESPONSE	20 keV - 2 MeV Gamma down to 40 keV Beta above 3 MeV Alpha	20 keV - 2 MeV Gamma down to 40 keV Beta above 3 MeV Alpha
HOUSING CONNECTOR	MHV	MHV
DIMENSIONS	Ø 70 x 254 x 64 mm	Ø 70 x 180 mm
ACTIVE AREA	15.5 cm²	15.5 cm²
WEIGHT	280g	450 g

DOSE RATE PROBES

SS330 AND SS335 COMPENSATED PANCAKE GEIGER PROBES

The SS330 provides an excellent general purpose end window GM probe with H*(10) energy compensation, which permits reliable measurements from ambient background up to 1 mSv/hr. The SS335 is functionally identical but with a different probe geometry.

SS340 SIDE WINDOW GEIGER PROBE

For ambient gamma radiation measurement, to H*(10).
Range: 0.1 µSv/hr to 2 mSv/hr
Energy: 45 keV - 2 MeV

	SS330	SS335	SS340
OPERATING VOLTAGE	550 V	550 V	500 V
MEASUREMENT RANGE	0.1 µSv/hr - 1 mSv/hr	0.1 µSv/hr - 1 mSv/hr	0.1 µSv/hr - 2 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	Ø 70 x 254 x 64 mm	Ø 70 x 180 mm	Ø 25 x 135 mm
ACTIVE AREA	15.5 cm²	15.5 cm²	40 mm
WEIGHT	300 g	470 g	100 g

SCINTILLATION PROBES

SS404 Al PROBE

THIN-CRYSTAL NaI(Tl) PROBE FOR LOW ENERGY GAMMA MEASUREMENT

An end window scintillation probe designed to be an equivalent to the 44A.

It incorporates a Ø32 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.

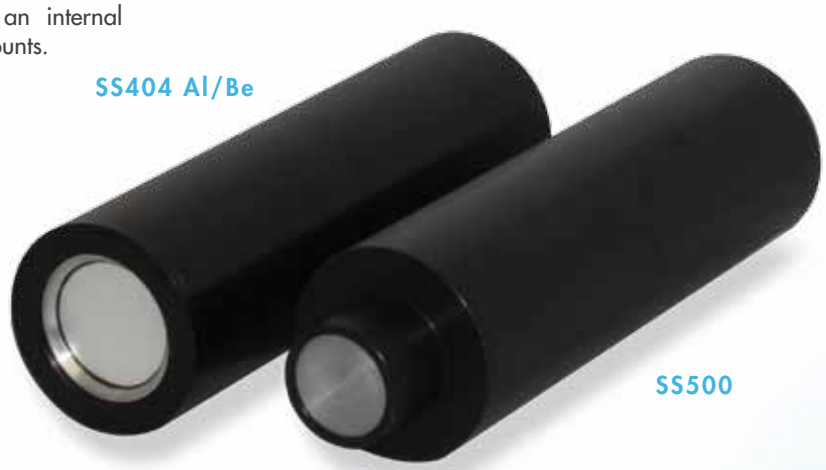
SS 404 AL/BE	
OPERATING VOLTAGE	Typically 650V DC
DETECTOR CRYSTAL	Ø32 x 2.5 mm NaI
ENERGY RESPONSE	**SS404 Al:** 15 keV to 250 keV **SS404 Be:** 5 keV to 250 keV
HOUSING CONNECTOR	MHV
DIMENSIONS	Ø54 x 185mm
WEIGHT	820g
TEMPERATURE	-10°C to +50°C

SS404 Be PROBE

THIN-CRYSTAL NaI(Tl) PROBE FOR VERY LOW ENERGY GAMMA MEASUREMENT

Similar to the SS404 Al but fitted with a beryllium window, which extends the low energy response down to 5 keV, making it suitable for counting ^{55}Fe.

SS404 Al/Be



SS500

SS500 PROBE

END-WINDOW GAMMA SCINTILLATION PROBE

A very sensitive end window scintillation probe designed to provide a cost effective gamma monitor for energies of 50 keV upwards.

It has a 25.4 x 25.4 mm NaI(Tl) crystal.

SS 500	
OPERATING VOLTAGE	650 V DC
DETECTOR CRYSTAL	25.4 x 25.4 mm NaI
WINDOW WEIGHT	35 mg/cm^2
GAMMA SENSITIVITY	300 cps/microSv/hr (^{137}Cs)
ENERGY RESPONSE	50 keV - 2.0 MeV
HOUSING CONNECTOR	MHV
DIMENSIONS	Ø44.5 x 205 mm
WEIGHT	300g
TEMPERATURE	-10°C - +50°C
HUMIDITY	Up to 95% RH non-condensing

2222A

^{3}HE NEUTRON MONITOR

The KWD 2222A is a digital survey instrument for portable neutron detection.

- ^{3}He filled counter, offering excellent sensitivity to neutrons
- Polyethylene and boron plastic shielding provides effective moderation at high energies
- The device spans 9 orders of magnitude in neutron energy, from 0.025 eV to 17 MeV, with an energy dependence in accordance with the ICRP Sievert response curve
- Dose rate and accumulated dose are displayed in both digital and analogue logarithmic format
- Excellent gamma rejection – 1 Gy/hr of ^{137}Cs changes the reading by <5 µSv/h
- Powered by alkaline batteries, for quick and easy replacement in the field
- Five configurable dose rate alarms for protection of personnel

DEVELOPED BY SOUTHERN SCIENTIFIC

HANDHOUND

HANDS-FREE HAND MONITOR

Designed mainly for use in isotope handling areas where hands could be contaminated.

The voice activated Handhound has been designed to help with HSE compliance, by keeping a record of hand contamination measurements for each user.

CONTAMINATION FREE

Hand sensor and voice activation means the Handhound can be operated entirely without touch

SENSITIVE DETECTION

A lead-collimated scintillation probe provides an excellent response to gamma emitters

CLINICAL HOUSING

Stainless steel, easy-clean enclosure

COST EFFECTIVE

Based on the Radhound, the Handhound is a low-cost but effective hand monitoring solution

LOW FALSE ALARM RATE

A rolling background subtraction automatically adapts to changing environment

ACCOUNTABLE

All measurements are logged against a programmed user and can be easily downloaded onto USB

COUNTING PROGRESS SCREEN

FURTHER MONITORING SOLUTIONS ARE CURRENTLY IN DEVELOPMENT SO KEEP AN EYE ON OUR WEBSITE OR VISIT US AT ONE OF THE MANY EXHIBITIONS WE ATTEND FOR UPDATES

RADHOUND ALARM

LOW COST AREA MONITORING SOLUTION

Available with a range of probe options to suit most applications

Bright LED Beacon: Alarm status is clearly indicated by a green or flashing red output

Low Cost: The affordable price of the Radhound Alarm reflects the simplicity of the solution, making it ideal for customers such as hospitals and research facilities

Simply Mounted: The adjustable base plate is designed to be easily fixed to a wall

Klaxon Alarm: Optional sounder gives an additional indication of alarm

Weatherproof: Can be mounted in a sealed box for operation in all weathers

Networked Solution: Can be connected to a PC, for data-logging and real-time remote monitoring. Several systems can be used to form an area monitoring network

Range of Probes: Probe can be chosen to fit the application, from the SS340 compensated Geiger probe for area monitoring to the SS600 alpha/beta probe for frisking

CEILING MONITOR

DEVELOPED TO PROVIDE ACTIVITY MONITORING FOLLOWING ADMINISTRATION OF RADIOACTIVE THERAPEUTIC TREATMENT

Typically the monitoring detector(s) is mounted in the ceiling (generally behind the ceiling tiles). A lead shield is used to collimate the detector to improve measurement response.

The systems are available with a range of optional detector configurations, the selection of which are dependent on the application. ie: The isotope of interest, the expected activity range to be measured and the distance to the patient bed.

THE SYSTEM HAS TWO KEY ADVANTAGES:

1. To follow ALARA regarding unnecessary exposure to staff
2. Improve security and safety - with assurance that the patient is resident in the therapy ward

AVAILABLE OPTIONS

GM ONLY

The GM only detector option is generally used for high energy isotope and where the activity levels are likely to be high.

GM/NaI(Tl)

The GM/NaI(Tl) detector option is used when the isotope energy can be relatively low (>200 keV) and activity levels will range from very high to low.

GM/ NaI(Tl) WITH GAMMA SPECTROSCOPY

The GM/NaI(Tl) with gamma spectroscopy option would be selected if the relative background is high and windowing of the isotope is required, or the system will be used for a range of different therapy isotopes (we offer the FLIR scintiSPEC system for this, see below).

TOTAL ACTIVITY MEASUREMENT SOFTWARE (TAMS)

The Southern Scientific Total Activity Measurement Software (TAMS) remotely records the patient activity. It is possible to plot and review the data, and there is the option of calculating the equivalent dose rate. This can assist in making the decision as to when the patient is safe to leave the department.

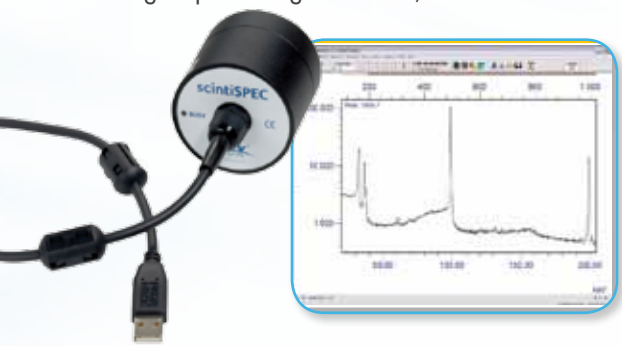
PLEASE NOTE: TAMS does **not** incorporate the ScintiSPEC winMCA32 software for the spectroscopy option.

SCINTISPEC / NaI(Tl)

UNIVERSAL MCA

Easy to use, universal MCA for scintillation detector spectroscopy and counting, using a USB interface for communications and power.

The scintiSPEC provides power to the detector PMT and contains signal processing electronics, a Wilkinson ADC and memory.



SPECTRUM PARAMETERS	SPECTRUM LENGTH	1024 channels
	BITS PER CHANNEL	32
	OPERATING MODE	PHA, opt. MCS
PROGRAMMABLE CONTROLS	FINE GAIN	x0.5 - x2.0
	PRESET MODE	Life or Real Time
	PRESET TIME	0.1 - 10^6 sec
INPUTS/ OUTPUTS	DETECTOR	2″ x 2″ NaI(Tl)
	COMPUTER	USB with cable
	HIGH VOLTAGE RANGE	0 to +1200 V DC, 1 mA integrated into tube base, 4096 steps, software controlled
SIGNAL PROCESSING	ADC	Integrated Wilkinson 60 MHz
	CONVERSION RANGE	1024 Channels
ENVIRONMENT	TEMPERATURE	0 to 50°C (32 to 122°F)
	HUMIDITY	Up to 80% non-condensing
SOFTWARE	WINTMCA32	Includes basic spectroscopy software

300SL

COMPACT AUTOMATIC LSC

The Hidex 300 SL uses three photomultiplier tubes for sophisticated triple coincidence counting, making it the only commercially available TDCR[1] counter. The 300 SL has been used, verified and purchased by a number of metrology labs.

QUENCH CORRECTION

TDCR provides automatic counting efficiency, with no internal standards or external source required

LUMINESCENCE FREE

Triple counting neutralises the detrimental effects of luminescence, allowing samples to be counted straight away

ALPHA-BETA

Clear and intuitive alpha/beta separation, with 2D graphic display for a more accurate PLI setting*

SELECTABLE OPTIONS

Chose only the features you need from the wide range of available options, including temperature regulation, alpha/beta separation, external source and metrology models

SMALL FOOTPRINT

Compact design and low weight (150kg) ideal for small labs

AUTOMATIC CHANGER

Accepts up to 96 vials per tray. Optional stacker for multiple trays extends capacity to 768 vials

HIGH EFFICIENCY

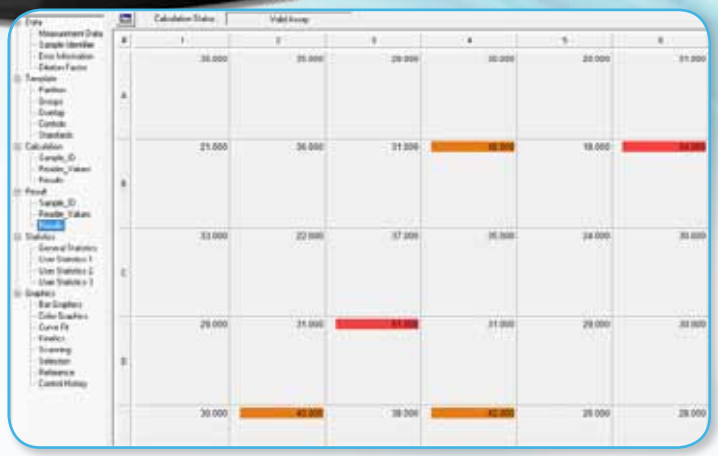
Up to 70% counting efficiency for ^{3}H unquenched samples

DUAL LABEL COUNTING

Dual label counting achievable with an 80:1 label ratio for variable quench standards when using optional external source*

MIKROWIN SOFTWARE

Includes comprehensive data analysis software with colour-coded exceeded threshold indication and automatic report generation in CSV or spreadsheet format



COLOUR CODED EXCEEDED THRESHOLD INDICATION

[1]TRIPLE TO DOUBLE COINCIDENCE RATIO

*MODEL SPECIFIC

LOW LEVEL

THE NEW SUPER LOW LEVEL VERSION BOASTS MORE SHIELDING, AND ACTIVE CANCELLATION OF BACKGROUND RADIATION

Background levels down to 4.7 CPM for ^{3}H in water with the Low Level and new Super Low Level versions

A LabLogic Company

tel: +44 (0)1273 497600

TRIATHLER

SMALL, MANUAL LIQUID SCINTILLATION COUNTER FOR LABORATORY AND FIELD WORK

Utilising a single, highly sensitive PMT, the market-leading Hidex Triathler is extremely portable, allowing samples to be counted anywhere.

COMPLETE SOLUTION

Measurement capability can be expanded to cover alpha, beta and gamma for full detection coverage

FLEXIBLE

Fully functional as a stand alone counter or with PC connection for full analysis and reporting

EXPANDABLE CAPABILITY

External NaI(Tl) 50 x 50 mm well detector with thick lead shielding for larger samples and lower level counting*

GAMMA DETECTION

Separate internal NaI(Tl) well detector with 8 mm lead lining for gamma counting*

LUMINESCENCE MEASUREMENT

Luminometer option for measurement of luminescent samples, in vials up to 20ml*

ALPHA-BETA

Alpha and beta counting with 2D graphic display for a more accurate PLI setting. The efficiency of alpha counting is equal to that of lab-based counters

PORTABLE POWER

Power in the field provided by a case with built in battery or vehicle socket adapter

PRE-PROGRAMMED WINDOW SELECTION

Preset nuclides: ^{3}H, ^{14}C, ^{32}P, ^{33}P, ^{35}S, ^{51}Cr, ^{125}I, with spare channels for user additions

MULTI-APPLICATION

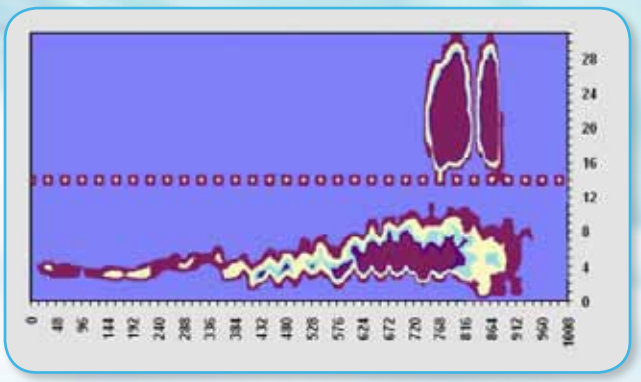
Wide variety of applications including wipe tests, liquid effluent, ^{14}C urea breath tests for helicobacter pylori and ^{222}Rn in water

HIGH-ENERGY BETAS

Plastic scintillator adapter for direct measurement of ^{32}P and other high energy betas, avoiding the use of liquid scintillants*

RESULTS STORAGE

Memory capacity for storage and post-analysis of several hundred measurements



ALPHA/BETA SEPARATION WITH VISIBLE PLI

*MODEL SPECIFIC

ALSO AVAILABLE

Southern Scientific also offers Capintec dose calibrators and a variety of automatic swab counters.

Please visit our website for more details:

WWW.SOUTHERNSCIENTIFIC.CO.UK

SOUTHERN SCIENTIFIC SUPPLIES LIQUID SCINTILLATION COCKTAILS, SOLUBLE WIPES & VIALS

DECONTAMINATION GEL

CBI POLYMERS HAVE DEVELOPED A RANGE OF EASILY PEELABLE DECONTAMINATION GELS TO SUIT ALL APPLICATIONS

Extensive testing against competitors has shown them to be effective on a vast range of smooth and porous surfaces, encapsulating and removing up to 99% of loose and fixed contamination.

- In addition to industrial decontamination, the gels can be used to fix contamination or to form a protective barrier
- Extensively used to recommission contaminated instruments and glove boxes
- Film can be analysed in a laboratory afterwards by HPGe or LSC
- Cleaner, more effective and safer than alternative decontamination methods
- Minimises contaminated waste output

TYPE	APPLICATION METHOD	OPTIMISED FOR
1101	Brush or paint on	Heavy nuclear and toxic industrial chemical and material decontamination
1108	Brush or paint on	Extremely heavy nuclear and toxic industrial chemical and material decontamination
1102	Brush or paint on	Oil and grease decontamination, including crude oils, diesel and PCB's
1120	Spray on using light-duty sprayer	Heavy nuclear and chemical decontamination from hard, smooth surfaces (glass, steel etc)
1121	Spray on using industrial sprayer	Heavy nuclear and chemical decontamination from hard porous and non-porous surfaces (concrete, wood, stone etc)
1128	Spray on using heavy-duty industrial sprayer	Extremely heavy nuclear and chemical decontamination from hard porous and non-porous surfaces (concrete, wood, stone etc)

1101, 1108 & 1102

1120, 1121 & 1128

BIND-IT™ DECONTAMINANTS

ELIMINATE RADIOACTIVE IODINE CONTAMINATION

- Highly effective at removing radioactive iodine
- Can be used to decontaminate fume hoods
- Clean outgoing packages, syringes, capsule containers
- Non-corrosive
- Bind-It™ hand soap is gentle, yet very effective
- Reduces patient and staff exposure
- Safely clean delicate NaI(Tl) wells, thyroid probes etc.
- Suitable for post-thyroid procedure cleanup (sinks, toilets etc.)

SAM 940

HAND-HELD RADIATION DETECTOR WITH INDUSTRY LEADING SPECTRAL RESOLUTION

Ultra fast identification is one of the key facilities of the SAM 940, using the patented and well documented QCC™ statistical enhancement transform within the software, the SAM 940 is a superb addition to any medical physics instrument pool.

The SAM 940 comes as standard with a 2" x 2" NaI(Tl) detector and the QCC™ statistical enhancement transform which provides background subtraction in real time and therefore the highest degree of sensitivity. This means fewer missed radioactive sources, tasks are completed faster and the number of report with poor statistics are greatly reduced when brought back for analysis.

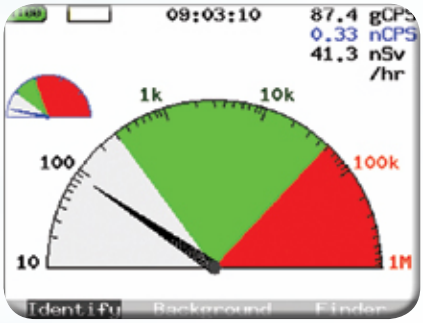
The SAM is designed to operate in any background, high or low, including Bremsstrahlung or Compton, with the interference subtracted in real time (one second or less). With this advanced identifier, your spectroscopic data collection, isotope identification and data analysis reporting are all automated with exceptional resolution. This large improvement in resolution also allows quick identification of mixed radionuclides, a typical problem with the overlapping peaks of lower resolution sodium iodide detectors.

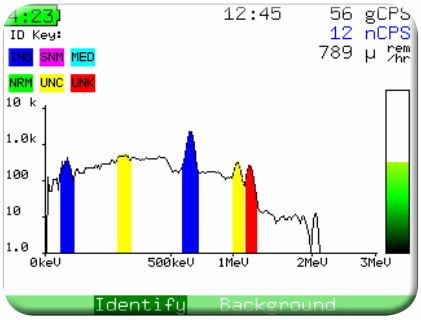
FEATURES

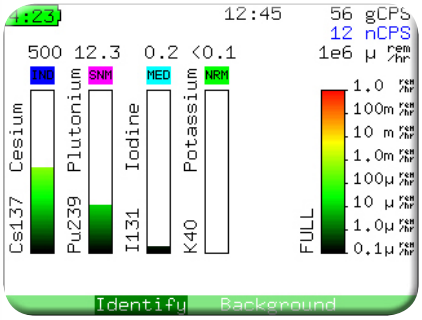
- No warm up or waiting period
- One hand / One glove operation
- Network ready with ANSI N42.42 data transmission
- Search and confirm with one instrument
- Standard batteries are used
- Highest sensitivity and response in real time
- Operates accurately in high background
- Auto calibration and stabilsation with NORM

APPLICATIONS

- Nuclear medicine isotope identification
- Waste or incineration ash monitoring
- Spillage or accident monitoring
- Emergency response/first responder
- Environmental protection
- GPS enabled for addition of GPS locational data







southern scientific
experience & expertise

WE HAVE MOVED!
Please take note of our new contact details.

Based in Lancing, West Sussex, Southern Scientific has been serving the nuclear medicine and health physics markets for over 25 years and customers include hospitals, nuclear power, processing and research sites, industry and the Ministry of Defence.

Southern Scientific Ltd. is an ISO-9001/2008 and ISO-13485/2003 company.

All our products are CE marked

www.southernscientific.co.uk

Scientific House
The Henfield Business Park
Shoreham Road
Henfield
West Sussex
BN5 9SL

tel: +44 (0)1273 497600
fax: +44 (0)1273 497626
info@southernscientific.co.uk

Use your smart-phone to scan this QR code for instant access to our website

A LabLogic Company