

### NUCLEAR MEDICINE

A range of products and solutions dedicated to ionizing applications in healthcare.

Supporting your energy



### ABOUT NUVIATECH HEALTHCARE

**NUVIATech Healthcare** is a brand by NUVIA, an international company specializing in nuclear and highly regulated environments. NUVIATech Healthcare offers a full range of highly reliable products dedicated to nuclear medicine. Our products are manufactured in our facilities across Europe and are the result of our long history in radiation protection and medical instruments. NUVIATech Healthcare is a well recognized brand thanks to the quality of our products and the dedication of our team.

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### INSTRUMENTS, SYSTEMS AND SOLUTIONS FOR A RANGE OF HEALTHCARE APPLICATIONS





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### 1 | NUCLEAR MEDICINE INSTRUMENTATION

For over 60 years, we have been developing and assembling high quality medical equipment, which makes us one of the most experienced manufacturers of these products. The result of this experience and continued cooperation with our customers is a modern, practical and user-friendly measuring system.

### **ISOMED 2010** Dose calibrator



### **OPTIONS/ACCESSORIES**

- PC system with monitor (optional touch screen function)
- Additional shielding
- $\cdot$  Test source Cs-137
- $\cdot$  Label printer and protocol printer
- Molybdenum kit
- · Y-90 pSet

### **APPLICATIONS**

- Nuclear Medicine
- $\cdot$  Activity determination
- $\cdot$  Dispensing
- Syringe filling
- Research and development Production of radiopharmaceuticals

#### **PRODUCT ADVANTAGES**

- Fast and precise determination of the activity of all radiopharmaceuticals used in nuclear medicine, with well-type ionization chamber with USB connection
- Standard measurement chamber calibrated for more than 30 nuclides (including Y-90, Re-186, Lu-177, I-124 and Ra-223), extendible nuclide library
- Integrated quality control (required by IEC 61303 and IEC 61948-4) for background, responsiveness, linearity and constancy checks
- Testing for molybdenum breakthrough according to European Pharmacopoeia 10.0
- Protocols meet the requirements of the medical authorities to provide evidence of the quality checks performed
- $\cdot$  Measured values can be saved, exported and printed out



### **RELATED PRODUCTS**

NuMED RPM 2005

Radiopharmaceutical management software

- Management programme for nuclear medical facilities
- Documentation of radiopharmaceuticals supplied, manufactured and consumed

![](_page_8_Picture_13.jpeg)

### 1 | NUCLEAR MEDICINE INSTRUMENTATION

### ISOMED 2100 Well-type Counter

![](_page_9_Picture_2.jpeg)

The ISOMED 2100 is a nuclear medicine measurement system for nuclide-specific measurement of gamma-emitting samples with low activity and small volume.

The system uses a highly-sensitive Nal scintillation probe with a central hole into which the sample is inserted.

### **PRODUCT ADVANTAGES**

- Many different nuclides to choose from
- Fast multichannel analyzer and highly-sensitive Nal scintillation detector
- The sample is almost completely surrounded by the detector material
- Digital measured value and energy spectrum displayed as a graph
- Automatic dead-time and background correction can be activated
- · Quality checks according to IEC 61948-1
- Measured values can be saved, exported, printed and displayed in graph form

### **OPTIONS/ACCESSORIES**

- · Additional shielding
- Test source Cs-137
- Printer

### **APPLICATIONS**

Nuclear Medicine

• Count rate determination of samples Universal radiation counter

![](_page_9_Picture_20.jpeg)

### **ISOMED 2162** Thyroid Uptake System

![](_page_10_Picture_1.jpeg)

The ISOMED 2162 is used to support treatment planning in nuclear medicine, especially in radioiodine therapy. The purpose of the Thyroid Uptake System is to quantify the percentage of radioiodine uptake in the thyroid gland.

#### **PRODUCT ADVANTAGES**

- Used for thyroid gland diagnostics and therapy
- Measurement of count rates, calculation of uptakes, determination of effective half-life and maximum thyroid uptake
- Calculation of the activity to be administered and of the effective focal dose in therapy
- Graphical display of the energy spectrum and the uptake curve
- Automatic dead-time and background correction can be activated
- Quality checks according to IEC 61948-1
- Measured values can be saved, exported, printed and displayed in graph form

#### **OPTIONS/ACCESSORIES**

Wide range of accessories such as collimators, absorbers, shieldings, thyroid phantom and test sources

#### **APPLICATIONS**

Nuclear Medicine

- · Thyroid uptake measurements
- Radioiodine Therapy

![](_page_10_Picture_17.jpeg)

### 1 | NUCLEAR MEDICINE INSTRUMENTATION

### **ISOMED 2163** Incorporation counter

![](_page_11_Picture_2.jpeg)

The ISOMED 2163 was specially developed for routinely monitoring the thyroid of medical and technical staff working at radioiodine therapy facilities, known as the 'incorporation check'.

### **PRODUCT ADVANTAGES**

- · For routine incorporation measurement
- Measurement of count rates and calculation of thyroid activity on this basis
- Calculation of the accumulated dose for a defined period of time
- Graphical representation of activity history over a calendar year
- · Energy spectrum displayed in graph form
- · I-123, I-125 and I-131 can be measured and evaluated
- Automatic dead-time and background correction can be activated
- · Quality checks according to IEC 61948-1
- Measured values can be saved, exported, printed and displayed in graph form

### **OPTIONS/ACCESSORIES**

- Probe shielding
- Tripod
- · Specially shielded chair
- Test source Cs-137
- Incorporation collimator
- Printer

### **APPLICATIONS**

- Nuclear Medicine
- Incorporation monitoring

![](_page_11_Picture_24.jpeg)

### PADOS Online patient monitoring network

![](_page_12_Picture_1.jpeg)

PADOS is a PC-based measuring system for dosimetric monitoring of patients on radioiodine therapy. Patients can be discharged from inpatient treatment after application of radioactive substances only if the dose rate does not exceed a specified value. PADOS allows you to periodically determine and record the dose rate when the patient is at rest. Patient exit from controlled areas can also be monitored.

#### **PRODUCT ADVANTAGES**

- Allows optimised occupancy planning the treatment ward
- Complete overview with graphic representation of the ward floor plan
- Free choice of colours for the representation of beds and probes in the ward floor plan and of curve trends in the graphics
- · Calculation of the discharge date
- As an information system for doctors and nurses it can help reduce staff exposure to radiation

#### **OPTIONS/ACCESSORIES**

If probes cannot be installed in every room, for structural reasons, a central measuring system can also be set up as an individual counter, using a transponder system for patient identification. The system can optionally be equipped with alarm probes to monitor patients exiting controlled areas.

### **APPLICATIONS**

Nuclear Medicine

- · Health physics
- · Monitoring and validation
- · Quality control

![](_page_12_Picture_16.jpeg)

# 2 LABORATORY EQUIPMENT

NUVIATech Healthcare. supplies custom-built laboratories and offices. We offer our expertise from A to Z, from the design of the facility, to technical processing and implementation, and subsequent customer service. Specific products can also be provided upon request by the end-user.

- · Tables, drawers, cabinets, support frames, sinks
- · Various types of surface materials organic polymers, resins, stainless steel, laminated plastic / chipboard
- · Colour adjustment according to customer's specific requirements
- · Custom-built laboratories and offices based on comprehensive technical analyses.

NUVIATech Healthcare offers a wide range of shielding products. In addition to our standard lines, tailor-made products are available to meet our customers' specifications.

### CUSTOMIZED LABORATORY FURNITURE, HATCHES AND OTHER EQUIPMENT

![](_page_13_Picture_8.jpeg)

### **PRODUCT ADVANTAGES**

- Laboratory furniture designed for various fields of application
- Various types of coating according to specific resistibility requirements (acids, organic solvents, radioactive materials, biological hazards)
- Various types of surface materials organic polymers, resins, stainless steel, laminated plastic / chipboard
- Colour adjustment according to customer's specific requirements
- Creation of the plan of the laboratory according to your specific requirements, including measurement instruments

#### **APPLICATIONS**

- · Radiopharmaceutical production
- $\cdot$  Quality checks
- · Dose preparation

### +

### **RELATED PRODUCTS**

#### Hatch

Syringes containing radiopharmaceuticals, prepared in the hot lab, can be passed to the doctor / patient in the treatment room through the shielded radiation protection hatch. Our radiation protection hatch is a stainless steel construction with lead and fireproof material integrated in the door. Dimensions and versions can be adapted to customer-specific requirements.

![](_page_14_Picture_8.jpeg)

![](_page_14_Picture_9.jpeg)

Design of laboratory and office furniture, professional installation and after sales services.

![](_page_14_Picture_11.jpeg)

# 2 | LABORATORY EQUIPMENT

### SHIELDING SOLUTIONS AND ACCESSORIES

## **CASTLE** Laboratory lead castle

![](_page_15_Picture_3.jpeg)

### **PRODUCT ADVANTAGES**

- Stainless steel housing with integrated lead shielding (sandwich construction)
- · Easy to decontaminate
- · Timeless design
- Customized dimensions

## **LBOX** Lead shielding for gamma spectrometry detectors

![](_page_15_Picture_10.jpeg)

### **PRODUCT ADVANTAGES**

- High quality, low background shielding for HPGe and scintillation detectors
- Innovative design allowing easy access to the detector and wiring
- Modular design simplifying transportation and handling
- $\cdot$  Easy and fast assembly and dismantling
- $\cdot$  50 or 100 mm low background lead, copper and tin coated shielding
- $\cdot$  Metal housing and robust stand

### **CABINET** Shielded cabinet for radioactive materials

![](_page_15_Picture_19.jpeg)

### **PRODUCT ADVANTAGES**

- · Designed for storage of radioactive materials, substances and waste
- $\cdot$  Whole construction made of painted / coated steel
- $\cdot$  Integrated lead shielding
- · Different dimensions, shape, shielding thickness, and layout

## **SYRSHIELD** Tungsten syringe shielding

![](_page_16_Picture_1.jpeg)

### **PRODUCT ADVANTAGES**

- Significant reduction in radiation exposure, especially the partial body dose of the hands
- Designed for various syringe types with different lock systems (also for PET applications)
- $\cdot$  Versions with clip lock, screw or bayonet lock and fitted lead glass window as well as acrylic glass syringe shieldings for  $\beta\text{-emitting nuclides}$

## **TROLLEY** Lead-shielded laboratory trolleys

![](_page_16_Picture_7.jpeg)

#### **PRODUCT ADVANTAGES**

- Manual trolley designed for transportation of PET radiopharmaceuticals
- · Lead shielding: 70 mm
- · With stainless steel coating
- Inner layout optimized to minimize the staff exposure to radiation

## **CONT** Lead containers for radioactive materials

![](_page_16_Picture_14.jpeg)

### **PRODUCT ADVANTAGES**

- $\cdot$  Whole construction made of stainless steel
- Integrated lead shielding (sandwich construction no visible lead)
- Container shape, size and shielding thickness as produced according to customer-specific requirements
- $\cdot$  Various designs and options according to specific area of use

## **SYRCASE** Lead syringe shielding case

![](_page_16_Picture_21.jpeg)

### **PRODUCT ADVANTAGES**

- · Significant reduction in radiation exposure
- $\cdot$  Designed for various syringe types
- $\cdot$  Versions with plexi glass for  $\beta\text{-emitting}$  nuclides

## 3 | AUTOMATION FOR RADIOPHARMACY AND RADIOCHEMISTRY

## **CRAB** Versatile platform for processing cyclotron produced radiometals

![](_page_17_Picture_2.jpeg)

CRAB is a system covering all the steps involved in processing of solid target irradiated at a cyclotron. With a unique design, it allows dissolution of the radiometal produced, radiochemical separation, formulation, and simple labelling.

Together with various accessories, CRAB can serve as a comprehensive radiochemical system enabling hands-free management of the whole production process, including automatic target loading to the cyclotron and transportation of the irradiated target to a hot cell.

### **PRODUCT AND SERVICE ADVANTAGES**

- Fully automated system to increase reproductibility and to minimise staff dose intake
- Separation process based on solid phase extraction (SPE), ending with formulation of the separated radionuclide into the required solvent
- Easy adjustment of final activity concentration according to stated needs
- $\cdot$  System driven by PLC and I/O cards, communication with PC via Ethernet cable

![](_page_17_Picture_10.jpeg)

### **PRODUCT HIGHLIGHTS**

- Two reactors, two selectors, a peristaltic pump, 3/2 way valves, and a separation column
- Up to four positions for uploading the solvents into the first reactor or to the SPE column for the separation steps
- Three positions for uploading the solvents to the R2 reactor that may be used for formulation or for simple labelling steps
- Inbuilt solid phase extraction column for the separation driven by peristaltic pump and solvents
- Wide range of processable radionuclides such as Cu-61, Cu-64, Ga-68, Zr-89, etc.

### APPLICATIONS

Solid target processing unit

- Automated system for cyclotron-produced radiometals
- Synthesis

+

### **OPTIONS/ACCESSORIES**

External cyclotron target chute enabling handfree optional loading of irradiated target into the shielding container

![](_page_18_Picture_12.jpeg)

Shielding container designed for easy transport of irradiated target and optional loading into the CRAB

### RELATED PRODUCTS

#### crab2rabbit

The system provides automated, fully remote-controlled procedures that do not require manual intervention during the target processing and labelling/separation steps.

![](_page_18_Picture_17.jpeg)

Scan to watch the video

![](_page_18_Picture_19.jpeg)

# 4 RADIATION PROTECTION

### **COMO SERIES** Hand-held contamination monitor

![](_page_19_Picture_2.jpeg)

The CoMo series offers the most advanced instruments in the field of surface contamination monitors. The innovative thin-layer plastic scintillation detector technology is completely gas free and both  $\alpha$  and  $\beta/\gamma$  sensitive. Designed for easy maintenance, users can easily make simple repairs to the instruments such as replacing detector foils themselves.

### **PRODUCT ADVANTAGES**

Gas-free device that drives the cost down

- · One-hand instrument, lightweight device
- $\cdot$  User friendly and intuitive to use
- · Large graphic display
- $\cdot$  Variety of optional external detectors add versatility
- $\cdot$  Multi-purpose device for a range of applications

### **OPTIONS/ACCESSORIES**

The CoMo-series offers a wide range of options including an integrated Geiger-Müller detector for additional dose rate measurement, a larger 300 cm<sup>2</sup> version instead of the standard 170 cm<sup>2</sup>, and a pure gamma measurement version. The numerous accessories available for all the CoMo versions make the CoMo series a very flexible contamination monitoring system.

### **APPLICATIONS**

Radiation protection Surface contamination monitoring

![](_page_19_Picture_15.jpeg)

![](_page_20_Picture_0.jpeg)

#### Wall station

The wall station allows you to reliably check hands without picking up the monitor. With power supply for charging the CoMo's NiMH-batteries. Easy to carry out indoor or outdoor measurements

![](_page_20_Picture_3.jpeg)

#### **Stationary Contamination Monitor**

- · Single-hand plastic scintillation detector (170 cm2)
- Separate wall-mounted electronics with optional 3-level LED lamp
- $\cdot$  Also available with integrated accupack

![](_page_20_Picture_8.jpeg)

#### Floor trolleys

Floor trolleys for 1 - 3 CoMo systems are available to monitor large floor areas. This makes it easy to carry out indoor or outdoor measurements.

![](_page_20_Picture_11.jpeg)

#### Accessories

Dose rate probes Pipe detector Pancake contamination probe Flat detector Lantern detector Corner detector

### (+

### RELATED PRODUCTS

P25

The Hand-Foot-Clothing Contamination Monitor is designed for particular use at workplaces with open radionuclide sources.

# 4 RADIATION PROTECTION

### **DOLMO** Dose and dose rate monitor

![](_page_21_Picture_2.jpeg)

The **DolMo I** with its integrated GM counter tube is specially designed for applications in the low dose rate measurement range of 1  $\mu$ Sv/h up to 100 mSv/h (45 keV - 1.3 MeV). The dose rate is simultaneously displayed with the cumulated dose.

The **DolMo II** is specially designed for applications with a higher dose rate measurement range of 10  $\mu$ Sv/h up to 1 Sv/h (55 keV - 1.3 MeV). The external detectors can be connected to all versions of the DolMo product line.

### **PRODUCT ADVANTAGES**

- Extensive portfolio of additional detectors for dose rate and contamination measurements
- · Large, graphic display
- $\cdot$  Simultaneous dose and dose rate indication
- $\cdot$  Intuitive menu
- · User-friendly keyboard
- $\cdot$  Torch function
- $\cdot$  User-centred
- · IP 65 (according DIN EN 60 529)

### **APPLICATIONS**

Radiation protection

![](_page_21_Picture_16.jpeg)

### HFC SERIES Hand-Foot-Clothing contamination monitors

![](_page_22_Picture_1.jpeg)

With more than 25 years of experience and a worldwide clientele, our HFC product line has established itself as one of the most versatile, widely available product lines on the market. Our close cooperation with our customers has resulted in modern, practical and user-friendly instruments.

#### **PRODUCT ADVANTAGES**

Innovative detector technology based on thin-layer plastic scintillation detectors

- · Gas-free equipment
- · Low operating and maintenance costs
- Operator-friendly user interface with large-area colour display
- Ergonomic housing design with stainless-steel cover

#### **OPTIONS/ACCESSORIES**

Our HFC models can be upgraded with several options and individually adapted to meet clients' requirements. For example: the number and the positioning of the hand detectors, the size of the foot detectors, the inclusion of a transponder system or an additional head detector.

![](_page_22_Picture_11.jpeg)

### **APPLICATIONS**

Radiation protection Surface contamination monitoring

![](_page_22_Picture_14.jpeg)

#### RELATED PRODUCTS COMO-170

P21 ion monitor

CoMo 170 is a portable contamination monitor for highly sensitive measurements of  $\alpha$  and  $\beta$ /y contamination

![](_page_22_Picture_18.jpeg)

# 5 RADIATION MONITORING SYSTEMS

### ALMO Alarm monitor

![](_page_23_Picture_2.jpeg)

The ALMO system is designed for permanent radiation monitoring on nuclear sites. One, three or six detection units can be connected to a single system, providing great flexibility. The stand-alone systems can be linked to a superior PC-system for central monitoring and documentation.

### **PRODUCT ADVANTAGES**

- · Easy to use thanks to the microprocessor-based control unit
- · Various surface-mounted and built-in housing versions
- · Additional software for continuous dose rate analysis, including data storage
- · 3 different models available with 1, 3 or 6 detector inputs

### **OPTIONS/ACCESSORIES**

- · Wide range of GM- and Nal-detectors
- · Optical and acoustic alarm units
- Software
- · Additional displays

### **APPLICATIONS**

Workplace and facility monitoring, e.g. in hot cells and laboratories

System monitoring, e.g. in isotope production

Ward and/or patient monitoring in nuclear medicine/ radiotherapy, e.g. in radioiodine therapy or afterloading

Exhaust air monitoring

Radiation protection

### **RELATED PRODUCTS**

P27

P23

MSU MSU is a unit designed to display measured values coming from different measuring probes and detectors.

DOLMO DolMo is a dose and dose rate monitor.

![](_page_23_Picture_24.jpeg)

### MSU Measuring and signalling unit

![](_page_24_Picture_1.jpeg)

The MSU is designed to display measured values from different probes and detectors. The system is compatible with a wide range of scintillation and GM probes. The MSU displays information from the connected probe, instantaneous dose rate, value of dose rate for set measuring interval, current date, time, and alarm levels for upper and lower alarm thresholds. The system can be supplied with a optical and acoustic alarm tower.

### **PRODUCT ADVANTAGES**

- Connection of a large number of probes to the same display
- · Status and alarm LED indicators
- Acoustic alarm
- · Simple and easy to use control keyboard
- Possibility of data reading from the master system (server) using the Modbus or NUVIA protocol

### **OPTIONS/ACCESSORIES**

Probes

### **APPLICATIONS**

ALMO

Radiation monitoring

![](_page_24_Picture_13.jpeg)

#### **RELATED PRODUCTS**

P25

The ALMO alarm monitors are used to monitor radiation dose rates in the laboratory production facilities.

![](_page_24_Picture_17.jpeg)

### 5 RADIATION MONITORING SYSTEMS

### NUDET EGM, EPL, ENA Intelligent gamma probes

![](_page_25_Picture_2.jpeg)

We offer various types of intelligent gamma probes GM, plastic and Nal(TI) gamma measurement probes. The instruments are monitoring dose rate, cps, spectrometric measurement (Nal(TI) only. They can be plugged with USB, RS232, RS485, Ethernet LAN connectivity.

These intelligent gamma probes work both indoor and outdoor application.

### **PRODUCT ADVANTAGES**

- High measurement accuracy
- Modular system allowing up to three GM tubes for wide measurement range
- · Ability to detect a wide range of dose rates
- Rugged construction, airtight housing and waterproof connectors
- $\cdot$  Open and easy-to-use data transfer protocol
- · MODBUS support
- Automated and optimized switching between detector tubes

### **OPTIONS/ACCESSORIES**

Data Logger Central software — environmental & workplace RMS Customization

### **APPLICATIONS**

Radiation and dose rate monitoring

![](_page_25_Picture_17.jpeg)

### **RELATED PRODUCTS**

MSU

MSU is a unit designed to display measured values coming from different measuring probes and detectors.

P25

![](_page_25_Picture_21.jpeg)

### EGS Auto-controlled volume air sampler

![](_page_26_Picture_1.jpeg)

A high-volume air sampling system used for capturing radioactive aerosols, emissions, dust and other air pollutants contained in the air. Sampled air passes through removable filters that are subsequently analyzed in a laboratory to evaluate volume activities of captured particles.

This state-of-the-air sampler is easy to operate and can be incorporated into various automated sampling systems. The system is designed to be remotely controlled including setting the parameters and data collection.

#### **PRODUCT ADVANTAGES**

Air sampling for radioactive material concentration measurement at workplaces - results are used for estimation of workers' intakes and determination of appropriate protective equipment and measures

Sampling system for collecting air in ventilation stacks for aerosol evaluation

#### **APPLICATIONS**

Quality control Radiation monitoring

![](_page_26_Picture_9.jpeg)

### 6 RADIOACTIVE WASTE MANAGEMENT

## **LIRW** Central system for the collection, storage and release of liquid radioactive waste

![](_page_27_Picture_2.jpeg)

The system consists of several stainless steel tanks connected to a facility sewerage system, where radionuclides may occur. The system is universal and can be implemented in any kind of facility.

The following measurements are available:

- · Continuous liquid waste level measurement
- Maximum and minimum liquid waste level measurement
- Radioactivity level in tanks measurement (liquid waste volume radioactivity monitor)

#### **PRODUCT ADVANTAGES**

- Number of tanks, volume can be tailor-made according to the project specification.
- Hardware and software enabling management of the LIRW are the part of the system, which is fully automatic; however, the manual control is available.
- $\cdot$  Online control & measurement of the waste
- $\cdot$  Controlled release to the sewerage

### **OPTIONS/ACCESSORIES**

The system can be controlled via a control panel or a software allowing remote monitoring of the technology and the radiation situation. The control system consists of PLC AMIT and a technological computer with touchscreen and software.

#### **APPLICATIONS**

Rad waste monitoring Storage and release

+

#### **RELATED PRODUCTS**

ISOMED2154	P30
ISOMED2151	P29
ISOMED 2154 and ISOMED 2151 are	
wastewater ounters used to measure the	
activity of radionuclides in wastewater from	n
nuclear medicine and radiotherapy treatme	ent
facilities.	

![](_page_27_Picture_21.jpeg)

### **ISOMED 2151** Wastewater counter

![](_page_28_Picture_1.jpeg)

The ISOMED 2151 is used to measure the activity of radionuclides in wastewater from nuclear medicine facilities and radioiodine therapy stations. The wastewater is collected in decay tanks. Samples from these tanks are filled into special measuring cups and measured with the wastewater counter. The limit value prescribed by the authorities can be reliably demonstrated.

#### **PRODUCT ADVANTAGES**

- · Activity determination of F-18, Sr-89, In-111, I-125, I-131, I-131 P (cartridge), Tc-99m or TI-201
- · Graphical display of the energy spectrum
- · Automatic dead time and background correction can be activated
- Nuclide-specific isotope windows
- · Measured values can be assigned to the corresponding tanks and archived with the energy spectra
- Integrated quality controls
- · Measured values can be saved, exported, printed and graphically displayed

### **OPTIONS/ACCESSORIES**

- Test source Cs-137
- · Marinelli beaker
- Printer

#### **APPLICATIONS**

Wastewater monitoring Quality control

![](_page_28_Picture_17.jpeg)

### **RELATED PRODUCTS**

LIRW

P28

Central system for the collection, storage and release of liquid radioactive waste ISOMED2154 P30

Wastewater Counter used to measure the activity of radionuclides in wastewater from nuclear medicine and radiotherapy treatment facilities.

![](_page_28_Picture_24.jpeg)

### 6 RADIOACTIVE WASTE MANAGEMENT

### ISOMED 2154 Wastewater counter

![](_page_29_Picture_2.jpeg)

The ISOMED 2154 is used to measure the activity of radionuclides in wastewater from nuclear medicine and radiotherapy treatment facilities. The wastewater is collected in decay tanks. For the activity determination of I-131 or Tc-99m, the system uses NaI scintillation probes located in an inner tube in the centre of the decay tanks.

### **PRODUCT ADVANTAGES**

- Activity determination of the nuclides I-131 or Tc-99m (other nuclides on request)
- · Up to 8 containers can be monitored simultaneously
- · Graphical display of the energy spectrum
- · Integrated quality controls
- Measured values can be saved, exported, printed and graphically displayed

![](_page_29_Picture_10.jpeg)

Scan to find out more or go to www.nuviatech-healthcare.com

### **OPTIONS/ACCESSORIES**

Display and evaluation software ISOMED 2254

- Allows the combination of up to 8 ISOMED 2154 in one application
- $\cdot$  Up to 64 decay containers can be displayed in total
- The counters can be displayed individually or simultaneously
- Disposal activity and disposal volume during evaluation are calculated
- Test source Cs-137
- Printer

### **RELATED PRODUCTS**

LIRW P28 Central system for the collection, storage and release of liquid radioactive waste ISOMED2151 P29 Wastewater Counter used to measure the activity of radionuclides in wastewater from nuclear medicine and radiotherapy treatment facilities.

![](_page_30_Picture_0.jpeg)

![](_page_30_Picture_1.jpeg)

Our FMS release counters are used to measure, administrate and release nuclear waste from hospitals.

Our product line includes measuring chambers of various size, combined with 4, 6, 8 or 10 high-sensitive Nal-scintillation detectors for  $\gamma$ -measurement. The chamber is shielded by 5mm lead.

#### **PRODUCT ADVANTAGES**

- Cost-effective alternative to disposal of nuclear waste
- An integrated balance takes into account the measuring object's weight and makes it possible to display the measuring values in Bq/g
- PC-based WIN software
- Network interface
- Complete management of nuclear waste and storage locations
- · Database for waste containers incl. storage locations

#### **OPTIONS/ACCESSORIES**

- · Label and protocol printer
- $\cdot$  Barcode scanner

#### **APPLICATIONS**

Measurment and administration of nuclear-medical waste

Optimization of waste storage

![](_page_30_Picture_17.jpeg)

#### **RELATED PRODUCTS**

WCM - Waste Control Monitor P32 With the waste control monitor you can make sure that during waste disposal, radioactive and conventional waste are kept separate.

![](_page_30_Picture_20.jpeg)

### 6 | RADIOACTIVE WASTE MANAGEMENT

### WCM Waste control monitor

![](_page_31_Picture_2.jpeg)

The waste control monitor is designed for simple and safe monitoring of waste for radioactive contamination or components. It is used in nuclear medicine, for example, in radioiodine therapy wards, to separate contaminated radioactive waste from conventional waste during the daily disposal of waste.

### **PRODUCT ADVANTAGES**

- · Automatic start of measurement via light barrier
- $\cdot$  Housing open at the front to allow easy loading
- Designed for waste bags
- Simple and safe handling for routine operation by cleaning staff
- $\cdot$  End of measurement signaled by three beeps
- Red-yellow-green signaling of the measurement result on the display and LED lights on the membrane keypad
- · External traffic light connectable
- Automatic calculation of alarm threshold depending
  on the background

### **OPTIONS/ACCESSORIES**

• Label printer can be connected for printing the measurement results on labels

### **APPLICATIONS**

Fast and easy radiation control of wast bags Waste management

![](_page_31_Picture_17.jpeg)

### **RELATED PRODUCTS**

FMS - Release Counter The FMS release counters are used to measure, administrate and release nuclear waste from hospitals.

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![](_page_31_Picture_20.jpeg)

### 7 | SHIELDING CONSTRUCTIONS

### NURAD Modular concrete-based shielding system

![](_page_32_Picture_2.jpeg)

NuRAD 8200 is a special modular shielding material made of low-background and high-density concrete in unified segments, modules and related building components with unique features designed for the nuclear industry, safety and laboratory application.

### **PRODUCT ADVANTAGES**

- $\cdot$  Effortless, fast, dry and clean construction
- $\cdot$  No glue or mortar required
- $\cdot$  Robust, solid and selfsupporting construction
- · Variety of surface finishing
- $\cdot$  No hazardous materials easy decommissioning
- $\cdot$  No toxic materials environmentally friendly
- Cost-saving shielding solution for gamma and neutron radiation

![](_page_32_Picture_12.jpeg)

![](_page_32_Picture_13.jpeg)

# 8 SOFTWARE SOLUTIONS

### **NUSOFT DORMIS** Software for facility radiation control

![](_page_33_Figure_2.jpeg)

It is a flexible information package that provides authorised personnel with a single control station detailing all the radiation workers accessing controlled zones. One central database concentrates data from all building monitoring infrastructure. The system provides a centralised display of all sensors to enhance the safety and control of operating personnel.

### **PRODUCT ADVANTAGES**

- Automated prohibition of access to unauthorised personnel to or from the controlled zones (e.g. contaminated workers, people without a dosimeter, expired medical permission, threshold for annual dose intake)
- $\cdot$  Overall supervision with all connected sensors
- Additional sensors can be connected to the system, e.g. air quality, temperature
- Protection of persons working in the sensitive areas within the monitored installation

### **APPLICATIONS**

Laboratory management Quality control Validation

t

### RELATED PRODUCTS

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MSU is a unit designed to display measured values coming from different measuring probes and detectors.

![](_page_33_Picture_15.jpeg)

![](_page_34_Picture_0.jpeg)

![](_page_35_Picture_0.jpeg)

![](_page_35_Picture_1.jpeg)

### NUVIATech Healthcare

The smart choice for radiation measurement in nuclear medicine.

![](_page_35_Picture_4.jpeg)

nuviatech-healthcare.com healthcare@nuviatech.com