Product **Catalogue**

NUVIATECH
I N S T R U M E N T S

NuNA MCB 3
Compact Multichannel Analyser

CoMo 170
97,0 Bq

COMPONENTS

MEASUREMENT SYSTEMS

Nuclear Measurement
Specialists

Nuvia provides standard and tailored measurement solutions to nuclear owners, operators and stakeholders for all stages of the facilities' life cycle. Nuvia can supply both components (detectors, analysers and software) or complete measurement systems which can incorporate carrier equipment, conveyor equipment, GPS control, signal processing units.

From modelling to implementation, Nuvia uses exclusive know-how and state-of-the art technologies in its monitoring systems dedicated to six major fields of application: waste management, homeland security, laboratories, health physics, continuous process monitoring and environmental monitoring.

VERTICAL INTEGRATION, A RANGE OF STANDARD AND TAILOR MADE PRODUCTS

▷ **Modelling:** assistance with identifying requirements, numerical modelling, any type of photon and neutron performance simulation calculations.

▷ **Design:** preliminary studies, detailed or implementation studies, choice of equipment including sensors, mechanics, automation, control command, sizing, sensor type.

▷ **Mechanics:** custom manufacturing in our workshops of conveyors and structural equipment; treatment of material, machined and welded parts, metal structures, lead or steel shields and collimators, and low background shielding made of modular concrete bricks.

▷ **Automation and control-command:** Assembly of pneumatic components and control-command, system design and state of the art documentation processing, 3D design, electronic projection, PLC programming, development of control-command specific software, visualisation and data collection.

▷ **Software developments with a dedicated team:** strong experience in acquisition systems and analysis of nuclear measurements, expertise across many areas of development (such as embedded applications, databases, protocols for data acquisition).

▷ **Qualification:** specifying procedures, verification and qualification of performance from QCT modelling of the system and measurements with radioactive sources.

▷ **Commissioning:** specifying appropriate factory and on-site test procedures, unit testing and factory calibration with radioactive sources, undertaking testing following factory or on-site assembly.

NUVIATECH
INSTRUMENTS

Contents

NuHLS GHP100
Portable Gamma-Ray Spectrometer

COMPONENTS

NUVIATECH
INSTRUMENTS

▷ COMPONENTS

Nuvia offers a full catalogue of very reliable components which can be tailored to your needs, such as detectors, digital analysers and software (data logger & data processing). Our components are designed and manufactured in our workshops and are the result of our R&D programmes for integration into our measurement systems.

Components
Detectors and Probes (NuDET)
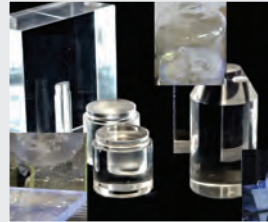
NuDET
AB

Alpha and beta scintillators

High efficient and reliable ZnS(Ag) alpha, beta and alpha/beta scintillation detector and assemblies for wide variety of applications - surface contamination, air filters, smears and wipe tests. Available in a variety of shapes and dimensions, completed with PMT (1 1/8" and 2") and MHV connector. Manufacture of alpha scintillation chamber (Lucas cell) for Radon measurement with a glass window and gas-tight valves, inner surface covered with ZnS(Ag) scintillator.

Shielding foil: < 1 mg.cm^{-2}

Alpha luminofor: ZnS(Ag)

Beta luminofor: foil type SPF 32

Wavelength max.: 425 - 465 nm

Max. illumination: 1000 lx

NuDET
NAI

NaI(Tl) scintillators and probes

Quality NaI(Tl) scintillation detectors and probes in standard and custom sizes for gamma spectrometry and counting devices. Scintillators are contained in low-mass, light-tight aluminium housings. Probes are integrally mounted scintillation assemblies containing a NaI(Tl) crystal optically coupled to a PMT, integrated voltage divider, magnetic shielding and user selectable connector or cable interface. Detectors: available in various sizes, including well types.

Resolution for 2x2": <7%

Resolution for 3x3": < 7.5%

PMT: with standard 14-pin socket

Connectors: MHV or BNC

NuDET
PLASTIC

Plastic scintillator detectors

Premium plastic scintillation detectors and assemblies designed for wide variety of applications. Thin layers/foils are suitable for detection of protons, electrons and beta particles. Larger volume detectors are used for measuring gamma radiation. Detectors can be fixed to the light guide, completed with a photomultiplier or provided as basic detectors with no additional components. Available in both standard and customised dimensions. 2" PMT with standard 14-pin socket or well type 1 1/8" PMT, complete with voltage divider and MHV connector.

Max. length of blocks: 2000 mm

Max. weight: 60kg

Standard thickness: 50 and 100mm

Max. cylinder dimension: 250x250mm

NuDET
NEUTRON

Neutron detectors

Highly efficient and gamma insensitive neutron detectors. Newly developed LiF6/ZnS based detectors are available in both standard and customised dimensions and available with optional HDPE moderator. Detectors are supplied with standard 14-pin socket or with voltage dividers and MHV/BNC connectors.

BF3 detector: 50x900mm

Moderator thickness: 70 mm

LiF/ZnS detector: 50x100x500 mm

PMT: 2" with standard 14-pin

Mod thickness: 30 mm HDPE

NuDET
EGM

Intelligent GM gamma probe series

Gamma probe models are based on various combinations of GM tubes and serve a wide variety of applications focused on radiation monitoring and measurement in outdoor and indoor environments. Combination of GM tubes provides the detection range of ambient equivalent dose rate spanning 9 decades. Rugged housing enables the probes to be used in harsh conditions.

Detection range: from 10 nSv/h up to 10 Sv/h

Operation temp.: -25˚C to +55˚C

Interfaces: USB + RS232 + RS485 or USB + Ethernet LAN (E suffix)

NuDET
EPL

Intelligent plastic gamma probe series

Intelligent plastic detector gamma module is the main part of NUVIA's Modular Screening Systems but can also be used independently for dose rate monitoring or as a part of various measuring devices. Available in different size/shape and volumes.

Detector: high-volume plastic scintillation detectors

Connectivity: RS-485 with NUVIA or ModBUS protocol.

NuDET
ENA

Intelligent NaI(Tl) gamma probe series

NaI(Tl) Intelligent Probes are designed for gamma spectroscopy monitoring. These probes can be used independently or as part of different systems for a wide variety of applications. They have been designed for sensitive measurement of dose rate and radionuclide analysis. Probes are available with 2x2" and 3x3" NaI(Tl) detectors with integrated MCB analyser. An optional weather sensor is also available.

Temp. range: -10℃ to +50℃

Optionally thermal regulation

Interface: USB, LAN (Ethernet)

Protection level: IP-67
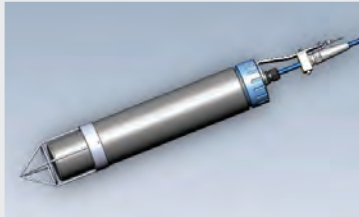
NuDET
ENA UW

Intelligent NaI(TI) gamma underwater probes

Water probes are available with 2" or 3" NaI(TI) detectors with an integrated MCB analyser. System is designed for gamma spectroscopy monitoring in water. Connectivity is provided by Ethernet interface, USB or RS-485. Detector stabilisation is based on gain shift, controlled by the position of the 1460 keV peak from K-40. Ethernet or GPRS connection (from cabinet) to the monitoring center.

E-Range: 40 keV up to 3 MeV

Temp. range: -10°C to +50°C

Max. water deep: 50m

Probe IP 68, Cabinet IP 65

Components
Software Solutions (NuSOFT)

NuSOFT
GAMWIN

Gamma and alpha spectroscopy analysis software package

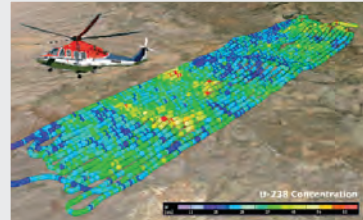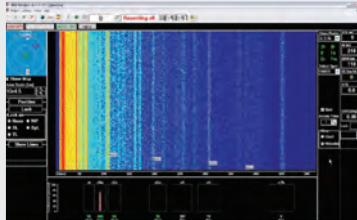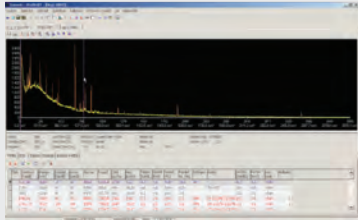GAMWIN is a software package designed for comprehensive spectral analysis and evaluation for data obtained from semiconductor and scintillation detectors which has been developed for Windows.
The system includes features for nuclide identification and quantification, peak searching and area determination, peak fitting (including the fitting of multiplets), background subtraction and more.

OS: Windows

NuSOFT
AIRIS/SIRIS

Data acquisition software for airborne and mobile systems

AIRIS/SIRIS is a Windows based, real time data acquisition and survey navigation software package for PEI mobile and airborne systems. AIRIS/SIRIS supports multiple instruments data logging, including AGRS spectrometers, GPS, radar, altimeter, barometric pressure sensors, temperature sensors, video camera and other installed instruments. AIRIS/SIRIS provides real time data acquisition information, gamma-ray spectrum representation, as well as operator and pilot navigation. The Pilot Guidance Unit (PGU) screen can be installed and will be supported by AIRIS/SIRIS software. AIRIS/SIRIS will notify the operator/pilot if the acquired data exceeds preset limits or in the event of equipment malfunction.

OS: Windows

NuSOFT
MAPCONVERT

Survey preparation and post-mission visualisation software

The MAPCONVERT software allows the user to prepare a survey, including calibrating the survey map images, defining the survey area, creating the survey grid, survey and tie-lines, allocating the survey measuring points, etc. During the post-mission processing the MAPCONVERT software application can be used for quick and easy visualisation of the survey path with graphical visualisation of observed peak height in selected channel.

OS: Windows

NUVIATECH
INSTRUMENTS
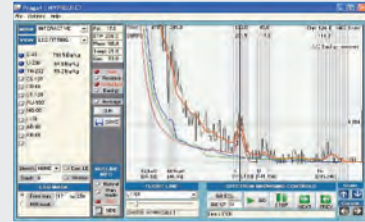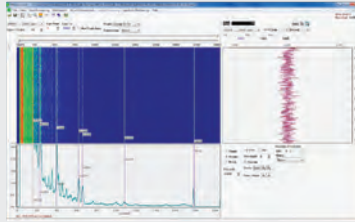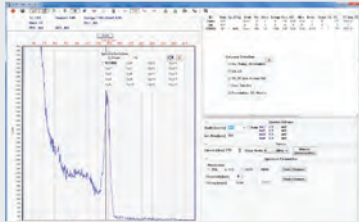
NuSOFT
AGRS CALIB

Calibration and setting software for AGRS based instruments

The AGRS Calib software is designed for calibration and experimental verification of portable, mobile and airborne instruments based on AGRS technology. This SW tool is used for initial energy calibration of a system and for re-calibration in case of detector replacement for maintenance. AGRS Calib allows measurement of the resolution of detectors, control of the tuning process as well as checking the stability and linearity of the spectra. The AGRS Calib offers capability to set the general parameters such as HV, detector volume, range of energy, sensitivity and many others.

OS: Windows

NuSOFT
DATAVIEW

Data quality control visualisation and GIS export software tool

DATAVIEW is intended for working with survey data collected using PEI instrumentation. The DATAVIEW application provides easy and quick data quality control, performance, visualisation, data analysis, and data export for processing, gridding and presentation. The data can be converted and exported to different GIS formats: ASCII, table text, Geosoft, KMZ, ANSI N42.42 and other formats.
DATAVIEW also offers spectroscopic data processing such as peak resolution and non-linearity calculation, point source activity estimation, verification of calibration on pads and other.

OS: Windows

NuSOFT
PRAGA

Gamma spectroscopy data processing software

PRAGA is a radiometric processing tool that makes the most of the information stored in the gamma-ray spectrum to evaluate the activity of natural and man-made radioactive ground sources. The PRAGA offers classic MSN and advanced NASVD processing techniques that allows the user to extract maximum spectroscopic information from the data. PRAGA is designed for airborne projects; PRAGA has been modified to make mobile and ground surveys more simple. PRAGA includes a radon removal technique, elimination of vehicle background, correction for meterological conditions and others.

OS: Windows

Components
Software Solutions (NuSOFT)
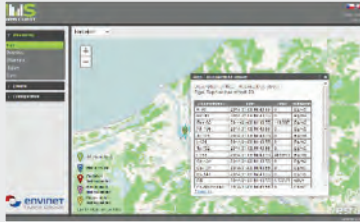
NuSOFT
RAMON

Monitoring and data visualisation software

RAMON is an efficient tool for gathering, evaluating and publishing radiation monitoring data transferred via GSM (GPRS), satellite and/or ethernet. The system is particularly well suited to data from monitoring station networks and mobile and portable radiation measurement instruments (data from radiation, air pollution or other physical quantities monitoring networks). Data is visualised using a web application. The system is designed for a radiation environmental monitoring centre (SCADA).

NuSOFT
DORMIS

Software for radiation control inside buildings

DORMIS is an efficient tool for radiation control inside buildings (RMS), personal dosimetry and access control (dosimetry). Data from all network appliances is transferred to one database. The software is primarily intended for radiation data management; however can be modified to operate with various types of sensors – and radiation monitoring devices (radiometry and dosimetry data acquisition, processing, evaluation and visualization). The systems comprises two main modules - Personal Dosimetry and RMS.

NuSOFT
WASTIS
NuSOFT
MBA

Radioactive waste and fuel management software

WASTIS is an excellent solution for all waste producers, waste processors and for temporary or long term waste repositories. It simplifies and optimises all activities regarding waste recording, moving, processing, tracking and reporting. MBA is intended for recording nuclear fuel and nuclear material evidence, including fuel receipt, transportation and disposal. The information system is able to generate documents for state nuclear regulators, International Atomic Energy Agency (IAEA) and EUROATOM

NuSOFT
INSPECTION
NuSOFT
METROLOGY

Software for inspection, planning and management of metrology laboratories

INSPECTION is a very powerful application based on the implementation of the legislative requirements for an NPP operator. This software package manages the list of mandatory checks for NPP equipment that are subject to approval by the Nuclear Authority.

METROLOGY is a database system specifically designed for metrology laboratories. The software's functionality includes recording customer information, device informa-tion, copies of documenta-tion produced, monitoring of orders and more. The system is also designed to be used at a client's location.

NuSOFT
CLARA
NuSOFT
RADIS

Laboratory information management system for chemical and radiometric laboratories

CLARA information system for chemical laboratories covering comprehensive sample information and results of techniques undertaken in the laboratories.

RADIS information system is LIMS type system suitable for radiometric laboratories focused on gamma spectroscopy.

NuNA
SCA

Digital four-channel counter

Powerful digital four-channel counter designed for signal processing from plastic scintillation detectors. Detectors are connected directly into the counter using PMT socket on the rear panel. The front panel is equipped with an Ethernet interface for connecting to local network and the USB interface for connecting directly to the PC. GAMWIN Software provides control and display interface.

PMT socket: 14 pin PMT (10 stages) USB-B connector, Ethernet (RJ45) Micro SD slot (local data storage)

Power Supply: USB or 9V - 30V / 2W DC

NuNA
SCA T

Desktop digital four-channel counter

Powerful digital four-channel counter dedicated to the signal processing primarily from plastic scintillation detectors. Detectors are connected through the single BNC or MHV connector on the rear panel. The front panel is equipped with an Ethernet interface for connecting to local network and a USB interface for connecting directly to a PC. Provided with software GAMWIN to control and display.

USB-B connector

Ethernet (RJ45)

Micro SD slot (local data storage)

Power Supply: USB or 9V..30V / 2W DC

NuNA
MCB

Digital multichannel analyser

The NuNA MCB digital multichannel analyser in a compact housing serves as an MCA base for processing signals coming from detectors equipped with a 14-pin, 10-stage photomultiplier tube. Signal processing enables the display of energy spectra from photon radiation detected by the most common types of scintillation detectors such as NaI(Tl), LaBr3 (Ce), plastic materials and others. MCB comprises a 14-Pin PMT socket, preamplifier, high voltage supply and control unit. MCB can be connected to a local network using the Ethernet interface or to a computer using the USB interface. GAMWIN Software provides control and display interface.

PMT socket: 14 pin PMT (10 stages) USB-B connector, Ethernet (RJ45) Micro SD slot (local data storage)

Power Supply: 9V to 30V / 3W DC

Conversion Gain: up to 2048 channels

NUVIATECH
INSTRUMENTS

NuNA
MCB T

Desktop digital multichannel analyzer

The NuNA MCBT digital multichannel analyser is a table version of MCB with an added variable gain amplifier, preamp power supply, high voltage supply and status display. MCBT can be connected to a local network using the Ethernet interface or to a computer using the USB interface. The rear panel is equipped with a standard SHV high voltage connector, BNC signal input and NIM compatible D-SUB9 preamp power connector. MCBT can process signals from most common types of scintillation detectors (NaI(Tl), LaBr3 (Ce), plastic materials and others). GAMWIN Software provides control and display interface.

USB-B connector, Ethernet (RJ45)	
Micro SD slot (local data storage)	
Input gain: 0.5x, 1x, 2x, 4x, 8x, 16, 32x	
High voltage: max. 1100V	
Preamp power output: +/-12V, +/-24V	
Power supply: 9V to 30V / 5W DC	
Conversion Gain: up to 4096 channels	

NuNA
PMP

Scintillation PMT divider with preamplifier

The NuNA PMT base with active PMT divider and preamplifier serves as a link between standard 14-pin, 10-stage photomultiplier tubes and signal processing electronic devices (MCA, counters). The PMT base is equipped with an industry standard high voltage connector SHV, signal output BNC and NIM compatible power supply D-SUB. PMTHV version incorporates integrated HV module.

PMT socket: 14 pin PMT (10 stages)	
Power supply: +/- 12V / 20mA	
Max HV: 1200 V	
Output impedance: 50 Ω	

MEASUREMENT SYSTEMS

From modelling to implementation, Nuvia uses exclusive know-how and state-of-the art technologies in its monitoring systems dedicated to six major fields of application: waste management, homeland security, laboratories, health physics, process continuous monitoring and environmental monitoring.

NUVIATECH
INSTRUMENTS

WASTE MANAGEMENT

NUVIATECH
INSTRUMENTS

NuWM GAMS 1

Mobile in-situ gamma spectroscopy measuring system

High performance and easy to use mobile HPGe assay system for a wide variety of in-situ gamma-ray measurements providing immediate, accurate, nuclide-specific results. Large wheels allow easy movement over rough ground, allowing easy transport of the entire system to less accessible locations.

Detectors: 1 HPGe

Position of detector: vertically and angle variable

Weight: <100kg

NuWM GAMS 2

Compact gamma spectroscopy measuring system

The compact gamma assay system NuWM GAMS 2 is designed for characterisation of mid- to high activity radioactive waste stored in 200 litre drums. The measured values are used to determine and quantify the radionuclides present and identify any hotspots present, which can then be further treated.

Detectors: 1 HPGe

Position of detector: Vertically and distance variable

Weight: <800kg

NuWM GAMS 3

Fully automated waste assay system

The fully automated NuWM GAMS 3 is designed for characterisation of medium and high activity radioactive waste. The system comes complete with an automatic conveyor. The default for the system is a 200 litre drum, this capacity is configurable by the user.

Detectors: 1 HPGe

Position of detector: Variable

Weight: <3,000kg

NuWM GAMS 4

Fully automated low level waste assay system

The fully automated waste assay system NuWM GAMS 4 is designed for free release measurement based on comprehensive characterisation (radioisotope identification and quantification) of low-activity radioactive waste stored in 200 litres drums. The system includes an automatic conveyor with user definable capacity.

Detectors: 3 HPGe

Position of detector: Fixed

Weight: <7,500kg

NuWM
MUM

Advanced fully automated low level waste assay system

Advanced fully automated low level waste assay system NuWM MUM is based on four high performance HPGe detectors for comprehensive low-activity radioactive waste characterisation and free release measurement. Monitored radioactive waste is freely stored in measuring containers. The system capabilities are enhanced using especially designed shielding blocks.

Detectors: 4 HPGe

Position of detector: Fixed

Weight: <40,000kg

NuWM
GEM

Gamma excavation monitor

A gross gamma system capable of real-time assay of excavated materials. This bulk monitoring system has gained UK Environment Agency approval for effective material segregation of volumes up to 1m³. Each bucket requires a few seconds to complete a measurement depending on detection requirements. Once completed, a colored light is automatically illuminated on the display to indicate the correct waste steam for the load. Approximately 350 tons of material can be measured and segregated each day.

Features: Battery-operated

Heavy duty frame: 1 m² footprint

Detector: 4 litre plastic scintillation detector and GM probe for high activity

This product is offered as a service

NuWM
HIRAM

High Resolution Assay Monitor-trailer mounted system

The High Resolution Assay Monitor (HIRAM) is a purpose built trailer comprising a turntable powered at 110 volts. The NuWM HIRAM is fitted with a high resolution gamma spectrometry (HRGS) system comprising a detector, multi-channel analyser (MCA) and laptop. The system is utilised for the assay of a wide range of waste packages, and can be programmed to apply fingerprints and calculate waste categories in real-time.
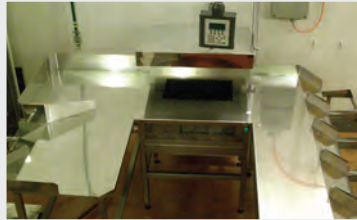
Application: characterization

Number of detectors: 1

Position of detector: Fixed

Detector type: HPGe

This product is offered as a service

NuWM
RCS

Release and control counter systems

Depending on the field of application, the various release counter systems offered can be used to release material from the controlled area or to control and administer temporarily stored waste.

In this selection of products you find measuring chambers with various sizes and shielding thicknesses, combined with large-area plastic-scintillation detectors for γ-measurement or thin-layer plastic-scintillation detectors for β-measurement. The user-specific software is easy to operate and allows nuclide- and object-related calibrations. An integrated balance takes into account the weight of the object to be measured and makes it possible to display the measured values in Bq/g.

NuWM
MASTAB

Manual sorting table for material or waste release

A manual sorting table for assessment of different kinds of waste and materials into inactive and low activity waste. The system is divided to three parts: the centre part contains a detector (large volume plastic scintillator) and control unit, the left side for the contaminated/active waste, right side for the « clear » waste.

Application:	manual sorting material, waste
Dim. [LxHxW]:	295 x 185 x 200 cm
Weight:	< 1 500 kg
Energy range:	50 - 2000 keV
Number of detectors:	1
Position of detector:	Fixed
Detector type:	Plastic detector SPD32U/500x300x100

HOMELAND SECURITY AND CIVIL DEFENSE

NUVIATECH
INSTRUMENTS

Measurement Systems
Homeland Security and Civil Defense (NuHLS)

NuHLS
AIRIS

Airborne integrated radiation monitoring system

AIRIS is designed for airborne radiation measurement based on gamma spectroscopy. The system can be installed on fix-wing and helicopter platforms. The algorithms provide observed data recalculation to the ground level, real-time identification of selected radionuclides, control of aircraft crew safety and intelligent pilot survey guidance. The mission navigation system is integrated with Pilot Guidance Unit (PGU). The data acquisition system provides internal data synchronization and real-time calculation procedures with precise positioning. A rugged laptop with Data Acquisition SW allows the operator to control all survey parameters, real-time spectra and dose rate, map-view navigation, alarms and others.

E-Resolution: <8.5%@662keV

Energy range: 30kev - 3MeV

Range: 5nGy/h – 0.1Gy/h (with GM)

Detectors: 16 litres NaI(TI)

NuHLS
IRIS

Mobile Integrated Radiation Monitoring System

The IRIS provides continues radiation measurements synchronised with GPS timing and location. The collected data is ready for mapping and reporting right after a mission. IRIS can be installed on any type of vehicles. It can be set in a trunk/cargo compartment, roof mounted cargo-rack, in-cabin installation, etc. The standard system comprises 2xNaI(TI) detectors; and optionally a high dose GM detector. IRIS is a fully auto-calibrating system with real-time spectrum stabilisation on natural radionuclide peaks. The data acquisition system provides internal data synchronisation, real-time calculation procedures, data graphic visualization, etc. The detection unit is supplied in a rugged plastic case, equipped with wheels and a handle.

MCA resolution: 256-2048 channels

Energy range: 30kev - 3MeV

Dose Rate Range: 5nGy/h – 0.2Gy/h

Detectors: max 2x4 litres NaI(TI)

NuHLS
SIRIS

Stand-off radiation detection system

SIRIS is a newly developed system for CBRNe and Home Land Security applications in radiation monitoring. The system provides immediate radiation detection, directional radiation recognition, isotopes identification, real-time activity calculation of natural and man-made isotopes, customisable notifications and crew safety alarms, and other services. The SIRIS is equipped with built-in UPS that provides up to 4 hours of an independent operation. The SIRIS data acquisition unit (rugged notebook) can be connected to the detection module using wireless or Ethernet protocols to provide real-time data visualisation and control capabilities. The surveillance results are ready for overlay on a map and reporting right after a mission.

MCA resolution: 256-2048 channels
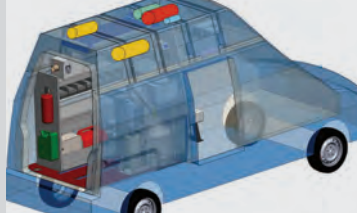
Energy range: 30kev - 3MeV

Dose Rate Range: 5nGy/h – 0.2Gy/h

Detectors: 2x4 litres NaI(TI), 1x neutron LiF6/ZnS detector, 1x energy compensated GM detector

Measurement Systems
Homeland Security and Civil Defense (NuHLS)

NuHLS
IMPAC

Integrated Multi-Parameter Console

The IMPAC - Integrated Multi-Parameter Console is a real-time data acquisition and navigation system designed for airborne and mobile radiation monitoring as well as environmental science applications. IMPAC is the base of PEI data acquisition for any system configuration. The system allows direct and easy integration and swapping of any sensor or measurement data system.

NuHLS
FIXIS

Fixed vehicle radiation monitoring system

FIXIS is mobile radiation monitoring system designed for fixed installation into vehicles and mobile laboratories. The system consists of two high sensitive plastic scintillator detectors, NaI(Tl) gamma spectroscopy detector, high dose rate GM module and optionally a solid scintillation neutron detector and weather sensor. The system provides continuous radiation measurements synchronised with GPS timing and position, whether on the move or at a stationary monitoring location. The detection system is orientation sensitive for effective localisation of contamination or illicit or orphaned radioactive sources. The acquired data is processed in real time, with the results available during the measurement and ready for mapping and reporting right after deployment.

Energy range: 30kev - 3MeV

Range: 5nGy/h – 0.2Gy/h

Detectors: 2x4 litres NaI(Tl), 1x Neutron LiF6/ZnS detector, 1x GM Energy Compensated Detector

NuHLS
CoMo-170 ZS

Hand-held contamination monitor CBRN version

· Thin-layer plastic-scintillation detector for α- and β/γ-contamination measurement.
· Operating temperature down to -20°C.
· Suitable for air transport.
· Supplied with earphones.
· 2 firmware versions available (simple version for decontamination squad, full version for special task force).
· Stationary use possible, for example in ECMo emergency contamination monitor.
· > 1,100 CoMo-170 ZS units supplied to civil defense in Germany.
· Complete set incl. case.

NUVIATECH
INSTRUMENTS

NuHLS
PDOSE

Portable and mobile gamma dose rate monitor

Portable monitoring system for measurement of gamma dose rate. The instrument is designed for portable and mobile radiation monitoring including field measurements, selective sampling and stationary monitoring. The detection module can work in unattended "Black-Box" mode or paired with an Andriod based data acquisition mobile device. It can be used for long-term monitoring operations. The wirelessly connected data acquisition system provides real-time control of the system settings; graphical data display; survey navigation possibilities, etc. It also enables synchronised multimedia data comments (photo, video or text) and real-time data transfer via GSM network.

Detector type: 2x energy compensated GM

Energy range: 50kev – 1.5MeV

Range: 50nGy/h – 0.2Gy/h

NuHLS
PGIS

Portable gamma-ray spectrometer

Portable gamma-ray spectrometer is designed for field and mobile gamma spectrometry surveillance in rugged environments. The PGIS detection module can be equipped with NaI(Tl), BGO, or optionally LaBr detectors of various volumes. The spectrometer is auto-calibrated and real-time stablised on natural gamma peaks. The user interface and data acquisition system is Android mobile device based. Acquired data is automatically synchronised with GPS time and location. The system provides the user with real-time calculation of the concentration of the selected radionuclide identification according to ANSI 42, survey navigation and data transmission via GSM channel. System enables synchronised multimedia data comments as a photo, video or text.

MCA resolution: 256-2048 channels

Energy range: 30kev - 3MeV

Detector: from 0.347 up to 4 litres

NuHLS
PGIS P

Portable detection system with plastic scintillator

PGIS P is a highly sensitive radiation monitoring system, based on spectroscopy detection with a plastic scintillation detector. The PGIS P is designed for portable and mobile radiation surveillance, search for illicit radioactive sources and localisation of contamination hotspots. The system provides high sensitivity measurement of gamma dose rate, ground survey navigation, precise data synchronisation with GPS and graphic display of measured values. The Android control unit has a wireless communication via Bluetooth. The PGIS P provides real-time identification and discrimination of man-made and natural radiation based on plastic scintillator spectrum processing techniques. The system allows the user to add synchronised multimedia (photo, video and text) comments to the data file.

Plastic Detector: 0.5 up to 4 litres

Energy range: 50kev - 3MeV

Basic Range: 10nGy/h – 0.1mGy/h

Optionally: GM Probe up to 0.2Gy/h

NUVIATECH
I N S T R U M E N T S

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Homeland Security and Civil Defense (NuHLS)

NuHLS
RADREFLEX

Portable contraband detector

· For control of hollow spaces, for example in cars, to detect hidden goods like drugs, weapons or explosives.
· Measurement system utilises integrated radioactive source (source activity below permit/ licence requirement).
· Radiation source integrated in special tungsten shielding.
· No handling and stock license required.
· Easy to use (surface scanning).
· Integrated measuring object library with reference values.
· Search mode supported by acoustic signals.

NuHLS
FAMO

Flexible mobile radiation monitor

· 2 detector units with 2 NaI-scintillation detectors each.
· NaI-detector 50 x 50 x 19 mm with edgewise coupled photomultiplier.
· Digital measuring value display incl. bar graph and optical/acoustic alarm unit.
· Very quick and easy installation on site.
· Can be used as vehicle monitor, portal monitor, or body monitor.

NuHLS
PORTAL V

Radiation portal monitoring system for vehicles

Highly sensitive portal monitor for vehicle scanning in industrial applications. The system utilises industry-proven detectors, sophisticated detection algorithms and advanced, low noise electronics technology. This combination provides a perfect solution for vehicle monitoring applications, requiring the lowest possible alarm threshold. System can be customised and contain various volumes and number of detection panels.

Detectors: 25 litre high-volume plastic scintillation detectors, default configuration with 2, 3 or 4 detectors (vertically or horizontally oriented)

NUVIATECH
INSTRUMENTS

NuHLS
PORTAL D

Emergency deployable modular radiation screening system

Compact modular emergency radiation screening system is easily deployable and transportable. Can be quickly and easily deployed in emergency. The system is also suitable for general screening of people and vehicles at events with large crowds, at borders, nuclear facilities and for other various homeland security tasks.

The system uses high volume plastic scintillation detectors - the number and volume of these can be customised.

Detectors: high-volume 5 litre plastic scintillation detectors, up to 6 detection panels (depending on configuration)

NuHLS
PORTAL P

Radiation portal system for pedestrian screening

Highly sensitive portal monitor for pedestrian security screening (airports, nuclear facilities, hospitals, public places). System utilises industry-proven detectors, sophisticated detection algorithms and advanced, low noise electronics technology. This combination provides a perfect solution for pedestrian monitoring, requiring sensitive and reliable system.

Detectors: high-volume 5 litre plastic scintillation detectors, configuration with 1 or 2 detectors.

NuHLS
PORTAL U

Universal radiation portal monitor

· Various detector sizes (25 l, 17.5 l, 7.5 l).
· System consisting of 2 large-area γ-plastic scintillation detectors, mounted in stainless steel housing.
· μ-processor based measurement electronics, PC version also available for better visualisation of measurement values.
· Automatic switching from background measurement to activity measurement.
· Energy-selective analysis.
· Already in daily use for the scrap and recycling industry, nuclear industry and border control.

NuHLS
PORTAL M

Pallet monitor with plastic scintillation detectors

- Gate monitor with 2 detector pillars (left/right).
- 1500 cm^2 plastic scintillation detectors per side.
- µ-processor based measuring electronics with LCD.
- Results calculated in realtime with adaptive alarm thresholds.
- Automatic background measurement and subtraction.
- Fast response time.
- Optical and acoustic alarm functions.
- Detector pillar made of stainless steel / plastic combination.
- Stable ramp system for passing through with hand lift truck.

Typically used for screening of products at goods-in.

Also available with roller conveyor for checking parcels or luggage
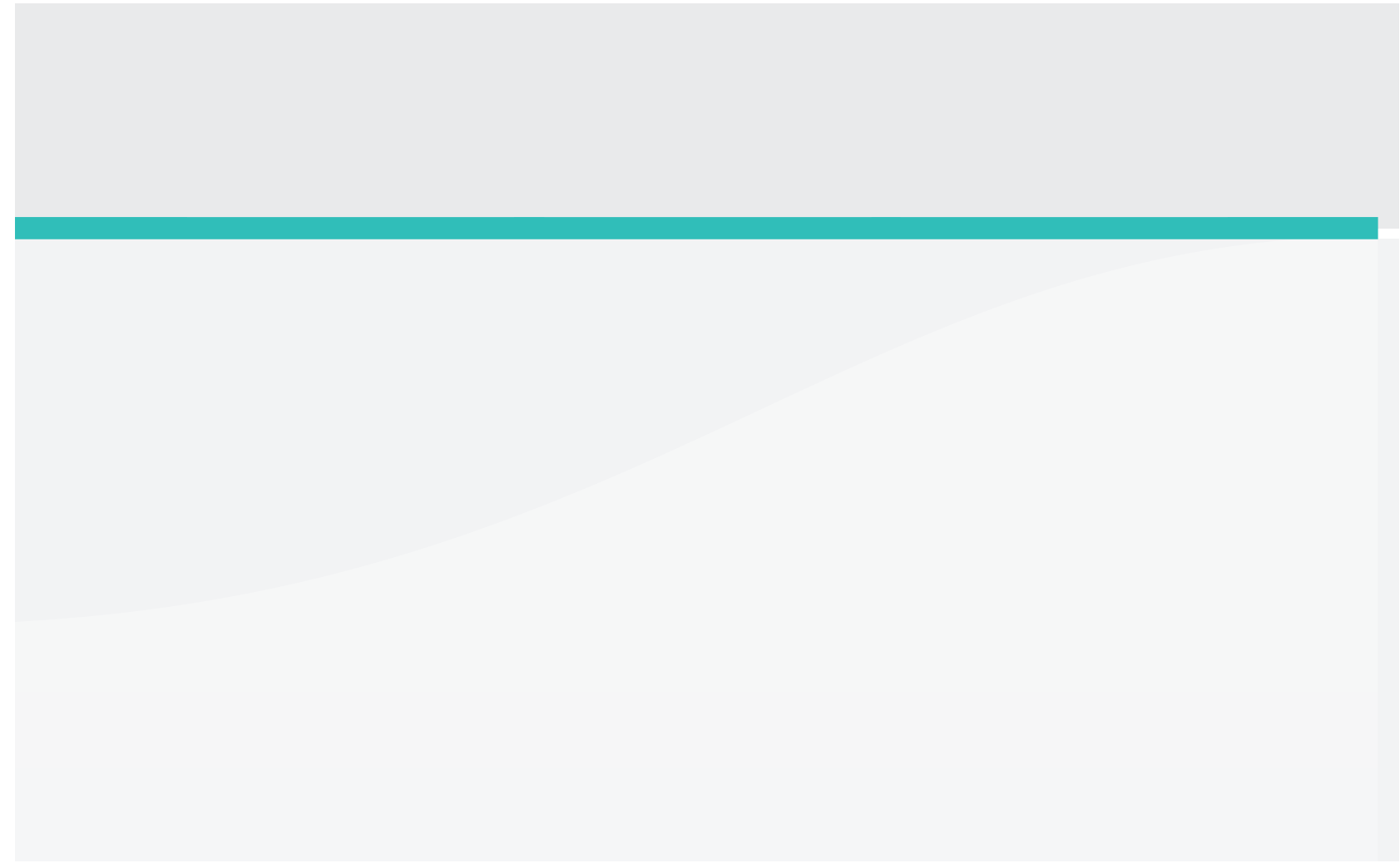
RADIATION PROTECTION AND DECOMMISSIONING

Measurement Systems
Radiation Protection and Decommissioning (NuHP)

NuHP
CoMo-170

Hand-held contamination monitor

· Simultaneous and selective α- and β/γ-measurement.
· Illuminated large-area LCD
· Measurement values displayed in cps, Bq or Bq/cm² as desired.
· Integrated nuclide library.
· Various versions and options available (e.g. CoMo 300).

NuHP
CoMo-170 G
CoMo-300 G

Mobile contamination monitors

The CoMo-170G and CoMo-300G are more robust instruments designed for large area monitoring where gamma is the radiation of interest. The instruments come into their own when undertaking large area gamma monitoring in situations where you may have contamination between layers of decontamination coatings on walls and ceilings. The 20mm plastic scintillator (protected by a 0.6mm aluminium plate) allows you to peak between the layers.

NuHP
CoMo DETECTORS

External detectors for CoMo instruments

· Flat contamination detector ESD-170.
· End-window contamination detector OW5.
· Large-area contamination detector PL-565
· End-window contamination detector OW20.
· Pipe contamination detector PD-32 with guiding elements
· Various other detectors for contamination or dose rate measurement (GM and NaI) available.

NuHP
CoMo-170 MF

Stationary contamination monitor

· Single-hand plastic-scintillation detector (170 cm²).
· Separate wall-mounted electronics with optional 3-level LED lamp.
· Illuminated large-area LCD.
· Simultaneous and selective α- and β/γ-measurement.
· Measurement values displayed in cps, Bq or Bq/cm² as desired.
· Integrated nuclide library.
· Also available with integrated accupack.

NuHP
ECMo

Emergency contamination monitor

This specially designed system is developed to take 4 or 6 CoMo-170 instruments to provide a simple and stress from contamination control point for large groups of people in an emergency e.g. after a nuclear accident

· Stationary contamination monitor made up using portable contamination monitors.
· Measurements done in easily understandable steps for person being measured.
· USB interface allows simple display of measurement values, e.g. traffic light system.
· Low-price solution for disaster management.
· Significant stress reduction for operator and measured persons compared to manual measurement (i.e. scanning).
· Easy height adjustment e.g. for children.
· Expansion up to 16 detectors possible, e.g. foot detectors.
· Already introduced in German civil protection and disaster management sector.

NuHP
HFC

Hand foot clothing contamination monitor

Stationary contamination monitor
· Thin-layer plastic scintillation detectors.
· Basic version with 2 hand detectors and 2 foot detectors.
· PC-based measuring electronics.
· Windows-based user software.
· Optional transponder allows traceable measurements to an individual.
· Network integration possible.
· Various versions available.

NuHP
SCINTO

High-sensitive gamma radiation monitor

· μ-processor based measuring electronics.
· Integrated NaI scintillation detector, 1 x 1.5", 1.5 x 2" or 1.5 x 3" as required.
· Measuring value display in cps or nSv/h or μSv/h.
· Customisable alarm thresholds.
· Also available with telescopic extension.

Main fields of use:
· Scrap metal and recycling sector.
· Security control of people or goods.
· Environmental monitoring.

NuHP
WIMP

Single wipe test counters

To check tools or measuring instruments used in a controlled area, but also to check working places in a controlled area, measurements are made by means of wipe tests. These wipe test samples are measured and evaluated in wipe test counters. Our product line consists of microprocessor- and PC-based wipe test counters for 60 mm, 120 mm or 220 mm diameter samples.
Our wipe test counters work with gas-free plastic-scintillation detectors which evaluate the samples (wipe test swabs, screening-tests or aerosol filters) separately for α- and β/γ-radiation. Detection limits are calculated according to ISO 11929.

NuHP
WIMP 60X

Multiple wipe test counter

Everywhere a large number of wipe test samples have to be measured, the multiple wipe test counter WIMP 60X has proved itself.
The PC-based measuring system makes it possible to evaluate up to 10 samples at the same time. Main advantages are the ergonomic and maintenance-friendly construction as all components are very easy to access. The software calculates detection limits according to ISO 11929. Our multiple wipe test counter is also available as WIMP 60x6 or WIMP 60x8 for counting 6 or 8 samples respectively.

NuHP
TOOLMOON

Tool contamination monitor

High-sensitivity contamination monitor with γ-plastic scintillation detectors, integrated in a tool cabinet:

· Contamination control of tools used in a controlled areas.
· Plastic-scintillation detectors integrated below the cabinet's surface (tray).
· Total detector surface 2760 cm², made up of 2 detectors.
· Shielded by 10 mm lead.
· Measuring electronics with LCD display integrated in the front of the upper drawer.
· Automatic background subtraction.
· All drawers except the upper drawer can be used for storage of tools.
· Detection limit approx. 100-150 Bq of Co-60 with 4 s measuring time.

NuHP
DRAMON

High-sensitive radiation control system

· Designed for contamination control of tools or for assessment of materials at goods-in (QA checks).
· Detection limit approx. 40 Bq based on Co-60 with 30 s measuring time.
· Detection limit calculation according to ISO 11929.
· γ-plastic scintillation detectors below and above the drawer.
· Shielded system.
· Easy to use, measurement value displayed on LCD screen.

NuHP
RCB

Release counter systems

For control and release of objects from a controlled areas:
· Version with 4 or 6 large-area γ-plastic scintillation detectors, for example in 4π-geometry.
· Measuring chamber shielded on all sides with 30mm low activity lead, internal dimensions from 500 x 500 x 560mm (w x D x H).
· Integrated scales.
· As desired with 1 or 2 doors (hatch function).
· PC-based measuring electronics with user-specific software.
· Detection limit < 50 Bq based on Co-60 in the centre of the chamber.
· Automatic routine for recurring tests.
· Customer-specific solutions possible.

NuHP
LARS G

Large area radiation scanner

Floor contamination monitor
· Large-area γ-plastic scintillation detectors (total 2500 cm²).
· Easy to move on pneumatic tyres.
· Measurement distance to floor surface electrically adjustable.
· Automatic speed calculation as a function of the required detection limit.
· Energy-selective measurement of count rate.
· Definable alarm thresholds.

NuHP
LARS W

Large areas contamination measurement system

This detector lift system has been developed for measuring large areas, such as during decommissioning works at a nuclear power plant, without requiring physical strength from operators. With this lift system you can move the shielded, collimated NuHP LARS W γ-detector over walls and ceilings. Automatic measuring cycles are possible. The combination of detector lift with the NuHP LARS W detector has proved itself in daily practice.

NuHP
LAUMO C

Laundry contamination monitor with conveyor belt system

· Measuring unit made up of upper and lower detector array.
· 6 plastic-scintillation detectors per array.
· Adjustable distance between detector arrays.
· Belt speed a function of the required detection limit.
· Stainless steel chain conveyor.
· Settings for specific articles defined individually.
· Automatic background measurement and subtraction.
· Constructed from stainless steel.
· Easy to maintain with optimal access to detectors.
· PC-based measuring electronics, large-area display.
· Integrated safety features.

NuHP
LAUMO D

Laundry contamination monitor with drawer load system

· Array of 3 x 3 plastic scintillation detectors (each 520 cm²) per drawer.
· Drawer size approx. 1000 x 500 mm, 2 drawers.
· Shielded drawer (30 or 50 mm lead).
· Constructed from stainless steel.
· PC-based measuring electronics with application-specific software.
· Integrated safety features.
· System size can be adapted to customer-specific requirements.

NuHP
LAUMO R

Laundry contamination monitor with running rail system

· Double array of 2 x 10 detectors (each 450 cm²).
· Plastic-scintillation detectors for β/γ-measurement.
· Transport system moves hanging overalls through the detector array.
· Rail speed as a function of the required detection limit.
· Constructed from stainless steel.
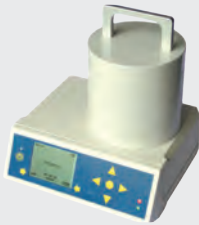· PC-based measuring electronics with application-specific software.

LABORATORIES

NUVIATECH
INSTRUMENTS
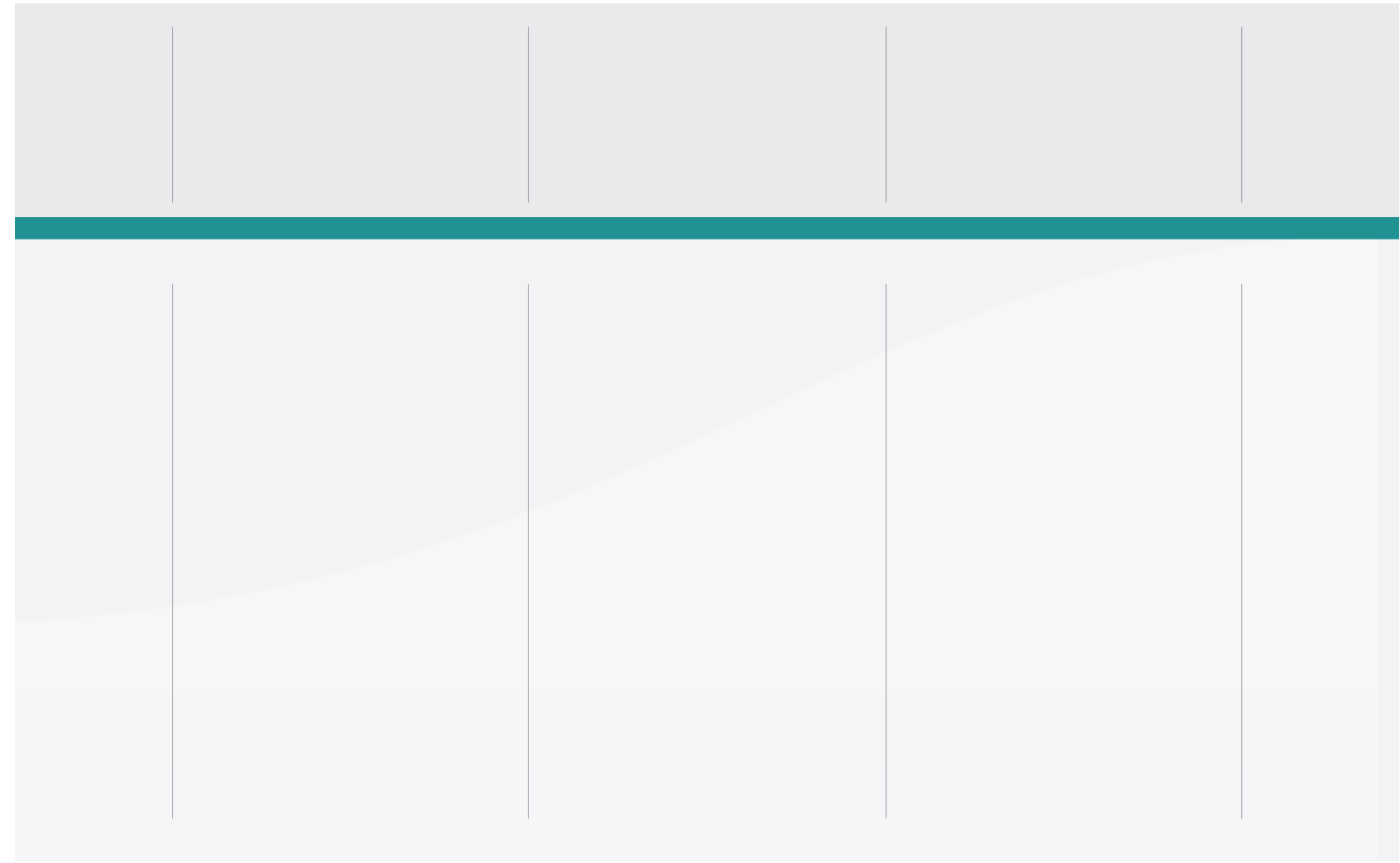
Measurement Systems
Laboratories (NuLAB)

NuLAB
FC-25

Radiation monitor for simple control of solid and liquid food

· Small, low-price measuring system.
· Integral γ-measurement.
· Calibrated for Cs-137, I-131.
· Shielded NaI-detector (50 x 50 x 13 mm).
· Shielded sample container (400 ml).
· Measuring value display in Bq/kg or Bq/l.
· Automatic background measurement.
· Detection limit < 35 Bq/l based on Cs-137.
· Measurement data printout possible via label printer.
· Very easy to use, bought and successfully used by public.
· Calibrated with certified DKD sources.
· This measuring instrument has established itself in daily use in Japan, after the Fukushima reactor disaster.

NuLAB
FNF

PC-based food counter with multi-channel analyzer

Sample measurement in Marinelli beaker
· 2.7 x 2" NaI-scintillation detector in lead shielding (30 / 50 mm lead).
· PC-system with external multi-channel-analyser (USB).
· Software for nuclide-specific measurement of key nuclides.
· Spectrum evaluation possible.
· Volume / weight entry possible.
· Calculation and display of the detection limit.
· Integrated quality control.
· Detection limit < 10 Bq/l based on Cs-137 with 30 min measuring time.

NuLAB
LBOX

Gamma spectroscopy shielding and transport containers

High quality, low background shielding boxes, containers and accessories for germanium (high-resolution gamma spectrometry) and scintillation detectors. The innovative design of the shielding for the HPGe detectors allows easy access to the detector and wiring. The great advantage of this shielding is the modular design system which simplifies transportation and handling as it is easy to completely disassemble.

Shielding: 50 or 100 mm low background lead (copper and tin coated)

Metal housing and robust stand

Measurement Systems
Laboratories (NuLAB)

NuLAB
LDIG

Laboratory fume-hoods for extraction of dangerous fumes, gases and particles

Extraction of dangerous fumes and gases during hazardous chemical processes and in handling aggressive chemicals. The fume hood features a metal housing with safety glass window, plastic extract, completed with worktop, drains, valves, lighting, wiring, control unit and a cabinet under the hood. The LDIG can be optionally equipped with lead shielding and leaded glass for radiochemical application. Digitally controlled exhaust outlet.

Double wall iron hood

Lead shielding app: up to 50mm

Max. exhaust: 1285m³/h (0.5m open)

Pressure loss: 86Pa @ 1000m³/h

NuLAB
ASC

Automatic sample changer for high resolution gamma spectrometry

Automatic sample changer for handling up to 60 samples in standard configuration. The system has been developed for automatic counting by high resolution gamma spectroscopy of large numbers of samples for long term measurement or for cases of radiological emergencies. The system can operate in full automatic or manual control mode and is remotely controlled by custom software from the PC.

Detector: HPGe Efficiency: 50-200%

Shielding: 50 or 100 mm Pb

Duralumin frame

Barcode sample identification

Start-up time: <5min

NuLAB
MORA VAN

Mobile radiometric laboratory

MORA VAN is fully equipped mobile radiometric laboratory for environmental measurement, monitoring and collecting various type of samples.
This systems are designed for monitoring of gamma and neutron radiation, measuring of alpha and beta contamination, measurement of photon and neutron equivalent dose rate and other parameters. High volume air sampler, water and field sampling set allow operators to take a variety of environmental samples. The radionuclide analyses is based on inbuilt and in-situ HPGe gamma spectroscopy. MORA VAN is provided with high sensitive fixed mobile monitoring system.

Inbuilt HPGe 50% spec. system with 50mm Pb shielding

In-situ HPGe portable system

Dose Dose rate and neutron measurement

NuLAB
MORA ISO

Deployable radiometric laboratory

A laboratory built in a standard ISO 1C type container designed for long-term deployment in the field. The configuration of laboratory and instrumentation is user definable. Inner space is divided into technological, analytical and sample preparation parts. Laboratory is heat insulated, maintaining a constant temperature in the interior and equipped with facilities for laboratory technicians (drinking water, emergency food). Power is available from external source or from own generator and back-up battery. MORA ISO provides the full gamma spectroscopy performance of stationary lab in the field. Various other instruments complement the complexity of monitoring.

Detector: 2x HPGe Eff. 50 and 100%

Shielding: 50 or 100 mm of Pb

In-situ HPGe gamma spectroscopy

Dose rate and neutron measurement
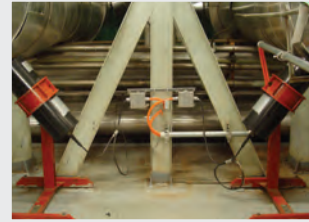
Start-up time: <60min

NUVIATECH
INSTRUMENTS

RADIATION MONITORING SYSTEMS

NUVIATECH
INSTRUMENTS

NuRMS
GASEM

Gamma spectroscopy monitor of noble gases

The device is intended for gamma spectrometric activity measurement of rare gases in nuclear power facilities exhausts. Sampling proceeds via a bypass and a compressor, that pumps the required amount of a sample through an aerosol filter and an iodine filter to a Marinelli beaker. The semiconductor detector and measuring vessel are shielded with low-background lead. Results are saved to PC summarised, and displayed as 1 hour and 24 hour spectra. The system identifies the individual radionuclides and gross activity volume in the measured air mass.

Energy range: 50-2000 keV

Detector type: HPGe

NuRMS
PRICOM

Gamma spectroscopy system for monitoring of the primary coolant

The system is designed for on-line measurement and analysis of the spectrometric profile of the primary coolant in NPPs. A remote semiconductor gamma spectrometer enables monitoring of nuclear fuel leakage (tightness of fuel assemblies). The spectrometric route is located near the pipe where the primary coolant flows. System components: HPGe detector, processing electronics, cooling system and adjustable collimator (shielding, stepper motors), computer for system and collimator control.

Energy range: 50-2000 keV

Detector type: HPGe

NIM electronic or MCA

Cooling device & collimators

NuRMS
N16

System for measurement of N-16 activity at NPP

System for on-line monitoring of N-16 activity for determining a potential steam generator leak. N-16 activity in the steam circuit is determined by the detection of gamma radiation by the scintillation detection. Data processing and analysis are undertaken by spectrometric SW together with advanced autonomous evaluation SW, which calculates the steam generator leakage in l/h.

Detector type: NaI(Tl) 3x3"

Communication: Ethernet/USB

Resolution: 8192 channels

NuRMS
MECOP

System for liquid density monitoring in pipelines

Equipment for on-line monitoring of density and concentration of any liquid flowing in piping lines using NaI(Tl) detector. The principle is based on measuring radiation attenuation. The higher the specific gravity, the higher is the radiation attenuation.
Comes with a Windows based control unit and advanced software package.

Detector: NaI(Tl)

Collimator with an exchangeable front head

NuRMS
EGS

Auto-controlled volume air sampler

High volume air sampler for ambient environmental monitoring applications. Sampling of radioactive aerosols, emissions, air pollutants, dusts etc. Designed to produce: flow rates up to 120 m³/h, flow rate adjustment, flow rate and flow volume measurement, user friendly operation, low weight, remote control, LCD information panel (current status and measured values). Adjustable for various filter types.

Air flow up to 120 m³/h

Interfaces: USB, RS232, RS485, LAN

NuRMS
AREA MU

RMS display and control unit

System designed to display the current status of radiation monitoring and dosimetry systems in the local area. The system can display the dose rates and dosimetry from all of the connected probes. It also allows the user to review the status and change the configuration of any connected detector.
The system provides alarm alerts with the exact location of the alarm.
All the monitoring data is managed by NuSOFT DORMIS, our central monitoring software.
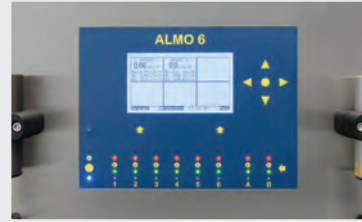
NuRMS
AREA SU

RMS measure and display unit

The NuRMS AREA SU (local simple display unit and the advanced display and alarming unit) are passive components of radiation monitoring networks designed to display the current measured values of connected probes and alarm alerts, where threshold have been exceeded. The unit is equipped with an information display, and 'quit' and 'test' buttons. Its alert system has three information/warning lights and an audible alert. All the monitoring data is managed by NuSOFT DORMIS, our central monitoring software.

NuRMS
AREA TU

RMS access and personal dosimetry terminal

The NuRMS AREA TU is a terminal designed for displaying the current status of the radiation and dosimetry systems, and for managing access into the monitored area. It can be equipped with different types of dosimeter readers (e.g. Thermo Scientific, Mirion) RFID or barcode readers for personal identification and personal issue. The system also provides alerts of any alarms. All the monitoring data is managed by NuSOFT DORMIS, our central monitoring software.

NuRMS
ALMO

Multifunctional dose rate measuring system

Depending on the system (ALMO-1, -3 or -6), 1 to 6 detectors can be connected. Typically GM detectors are used. We offer a complete program for different measuring ranges. The system also accepts NaI-scintillation detectors or neutron detectors. Depending on the requirements, the NuRMS ALMO systems are available as special clean room versions or can be integrated into networks for display of measurement values and alarm indications at a central point.

ENVIRONMENTAL MONITORING

NUVIATECH
INSTRUMENTS

NuEM
RAMS

Environmental radiometric monitoring station

The NuEM RAMS measures ambient dose rate equivalent and is equipped with an Intelligent NuDET EGM probe (GM tubes), or optionally with a NaI(Tl) gamma spectrometric probe weather station, and a solar panel and batteries for independent operation in the field. Data can be transferred via GSM modem (3G, GPRS, EDGE, and others) and/or Ethernet (LAN/WLAN/Wi-Fi) and recorded in a central server using NuSOFT RAMON SW system. Additional stations create a monitoring network suitable for monitoring an area during a radiation incident.

Probes: NuEM EGM, EPL, ENA

Communication: satellite, GSM, radio, Ethernet

Power Supply: batteries, solar panel, mains supply

NuEM
RAMS UW

Environmental radiometric station with under water probe

The underwater monitoring station NuEM RAMS UW is designated for environmental monitoring of water objects. System is equipped with an intelligent gamma spectrometric underwater probe NuDET ENA UW with NaI(Tl) crystal size 2″ or 3″. The spectrum is fully stabilized using the 1460 keV peak from K-40. The station is completed with data processing and transmission unit and various types of power supplies (batteries, solar panels, etc.). Data can be transferred and displayed on NuSOFT RAMON, our central monitoring software.

Probes: NuEM ENA UW

Communication: Satellite, GSM, RF, Ethernet

Power Supply: Batteries, solar panels or mains supply.

NuEM
RAMSAT

Portable dose rate monitoring stations with satellite transmission

The NuEM RAMSAT radiation monitoring system is designed for operational deployment in the field to provide ambient radiation monitoring and assessment of radioactive and nuclear pollution in the environment or work place monitoring for radiation safety. The system is primarily designed for measuring ambient dose equivalent and ambient dose equivalent rate.

Detector: GM tubes

Outdoor stand: Tripod

Communication: Satellite module (optionally radio and GSM), Bluetooth module for setup (10 m)

NuEM
GROUNDHOG

Portable Gamma-Ray Spectrometer

Goundhog 'Fusion': General purpose technology for use as portable or vehicle mounted systems. NaI(Tl) detectors coupled to an advanced gamma radiation spectrometer mounted in carbon fibre composite cases to reduce weight and improve the transmission of low-energy photons. Detector and spectrometer are connected to an Ultra-Mobile PC carried by the operator or fitted to the vehicle. Mapping grade GPS used to calculate the position of every radiation measurement with sub-metre accuracy. Typically used in projects to detect cæsium-137 distributed in soils at levels of 200-400 Bq/Kg.

Application: Portable & Mobile gamma spectroscopy system

This product is offered as a service

NuEM
GROUNDHOG V

Land contamination monitoring vehicle

System is designed for the detection of particles of radioactive material typically the size of a grain of sand or smaller. With five large NaI(Tl) detectors arranged to survey a 2 metre strip in each sweep. Detection of Cs-137 particles typically 10^3-10^5 Bq in the top 100-200mm of sand. Synergy as above but also equipped with eight Insight detectors to improve the efficiency of Am-241 typically to levels of 10^4-10^5 Bq in the surface layer of sand. Systems are fitted with advanced 'alarm' mechanisms allowing particles to be removed as detected. Groundhog surveys also support remediation strategies based on in-situ selective sentencing of waste. Survey results can be 'turned around' in less than an hour.

Application: Land mapping

This product is offered as a service

NuEM
GROUNDHOG P

Land contamination monitoring vehicle

Vehicle to measure all type of radioactive contamination with plastic scintillation probes. Mapping grade GPS used to calculate the position of every radiation measurement with sub-metre accuracy.

Application: Land mapping

This product is offered as a service

NuEM
DRONES G

Gamma detection and spectroscopy module for application on drones

The DRONE-G is state-off-the-art technology of NUVIATECH Instruments for light airborne monitoring taking advantage of Drone devices as carriers. The system offers an excellent environmental radiation monitoring performance. It is designed for surveying smaller areas to search for uncontrolled radioactive sources, potential contamination or work in places with hazardous dose level.

This module consists of a NaI(Tl) gamma spectroscopy probe, a high dose level detector equipped with two energy compensated GM tubes and a mini air sampler for air contamination measurement. The gamma spectroscopy unit works with spectra with resolution from 256 up to 2048 channels and energy range from 50kev to 03Mev. Typically the module is designed to incorporate NaI(Tl) detectors with dimensions of 2x2 or 3x3 inches. Time and position data synchronized with GPS. Real-time gamma dose rate measurement is based on recalculation from spectrum. Accumulation time is selectable by the user starting from 1sec. The module offers internal data storage in the main unit as well as a wireless real-time data transfer to the control unit (Laptop) with Drone SW application. The operational time with internal battery is about 4 hours.

Dose Rate Range: 50nGy – 100mGy/h	
Resolution: <7% on Cs-137@662keV	
Energy Range: 50keV – 3MeV	
Air Sampling: max. 5.2 Litre/min	
Weight in total: max. 4.5 kg	
Power: 3x LiPol, 11.1VDC/5100 mAh	

Product **Catalogue**

NUVIATECH
I N S T R U M E N T S

www.nuviatech.com
instruments@nuviatech.com