HELGESON SCIENTIFIC SERVICES (HSS)

peo DETECTION

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Helgeson Scientific Services (HSS)

Helgeson Scientific Services (HSS) designs and manufactures advanced radiation monitoring systems focused on personnel safety, facility protection, and waste control. Their portfolio includes whole-body monitors, portal detection systems, and waste management solutions—each developed to support the safe handling of radiological materials in critical environments.

HSS delivers systems that combine technical accuracy with ease of use. Their body and portal monitors enable fast, effective screening of individuals and vehicles, minimizing the risk of contamination and ensuring regulatory compliance for nuclear facilities, recycling centres, and high-security operations. Meanwhile, their waste monitoring solutions help organizations identify and control radioactive materials in scrap, waste, and recycling streams—reducing environmental risk and improving accountability.

From personnel protection to material control, HSS provides the tools that help maintain safety and operational integrity in high-stakes environments. Strengthen your radiological safety framework with trusted, field-proven systems from Helgeson Scientific Services!

BODY MONITORS

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HS-BEXA – Alpha Beta hand feet monitor

The HS-BEX monitors are multitasking equipment designed for the detection and measurement of radiation ALPHA and BETA on the hands and feet of potentially exposed personnel through a fully automatic operation.

The system can be configured to have 3, 4, 6 or 7 detectors depending on the application and budget. An equipment that complies with the highest quality standards, designed and assembled in Spain.

HS-BEX – Beta gamma hand feet monitor

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DIYS – Bed type whole body counter for internal dosimetry

HS-ABOMO – Alpha beta gamma portal for personnel monitoring

Multitasking two-step device

The HS-ABOMO unit is a multitasking two-step device designed for the detection and measurement of radioactive contamination, ALPHA, BETA and GAMMA, on potentially exposed personnel.

It has been specifically designed for controlled areas. It includes up to 31 detectors, which work autonomously and independently, allowing to perform simultaneous measurements with different alarm levels.

The user can identify exactly in a different channel the beta cps and gamma cps since the detectors are different for each type of radiation. Its operation is fully automated. The equipment has sensors that detect when a person enters the portal, interrupting the background acquisition and initiating automatically a thorough examination of the subject.

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HS-RAM – Gamma portal for personnel monitoring

Completely autonomous equipment

The HS-RAM monitors are completely autonomous equipment designed for the detection and measurement of gamma radiation on exposed workers.

They are designed to perform high speed measurements, allowing fast counting of a high volume of nuclear power plant workers. With different versions that customize the number of detectors, size, barriers, etc. the HS-RAM is without doubts the most flexible gamma portal for fast screening of personnel.

QUICKY – Whole body counter for internal dosimetry

Helgeson “Quicky” In-Vivo Counter is designed to complement any health physics program which includes routine whole body counting.

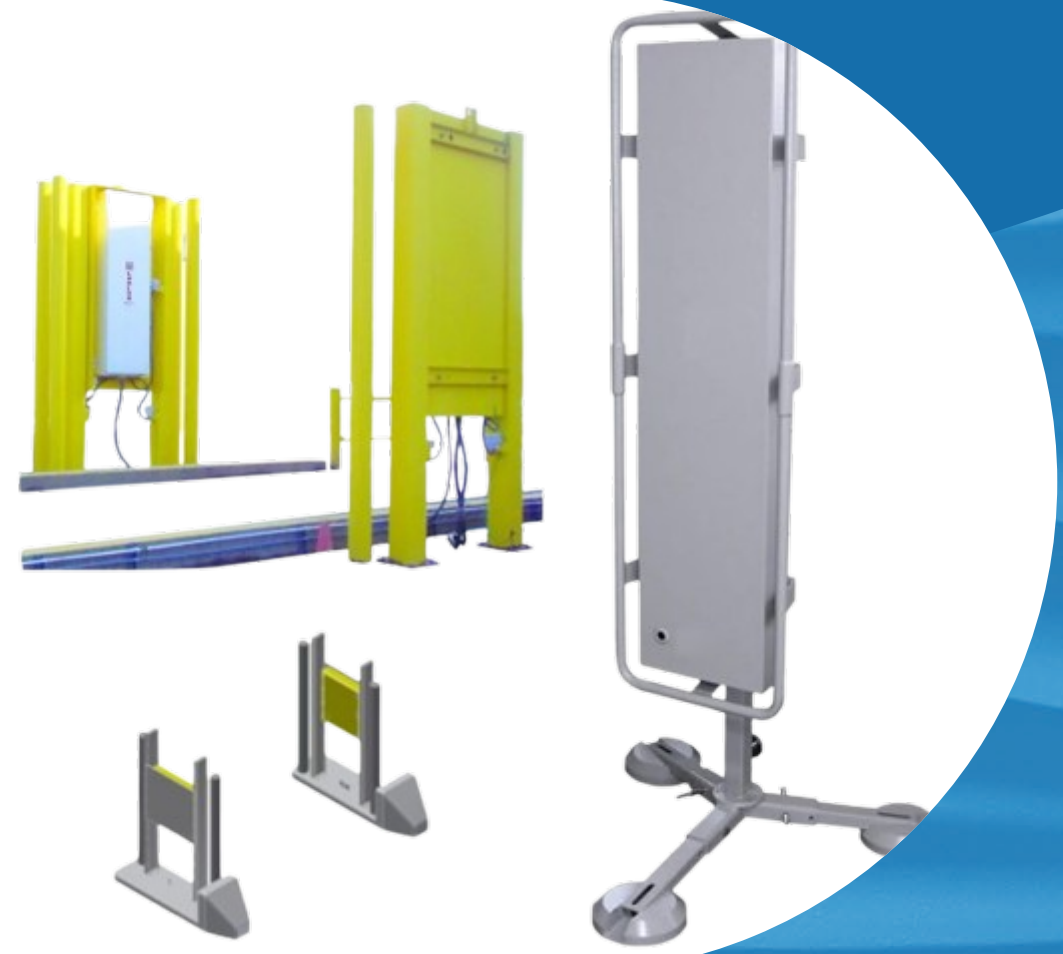
The “Quicky” is used to rapidly screen personnel or it can be used with a fixed counting time to obtain more precise results. The printed results provide the documentation for subject identification, counting time and date. Results are reported in Becquerel or Nano curies. The “Quicky” can reduce your regular counting requirements and costs significantly.

User-friendly software

Software for the “Quicky” is “user-friendly” with a menu format which provides a variety of standard and optional operating programs. System performance software includes a Quality Assurance program which checks the electronics of system, reporting any errors to the operator. An Energy Calibration program allows the gains of the individual detector-amplifier systems to be adjusted to uniformity and conformity to the design parameters.

- Data Acquisition, continuous spectral display.
- Data Analysis with graphs of original data and residuals.
- Calibrations: Energy vs. Channel and Efficiency, FWHM vs Channel.
- Parameter Modification for complete control: acquisition, analysis & miscellaneous parameters.
- File Maintenance.
- Dose calculating software based on ICRP recommendations and approved by the Spanish Nuclear Council.

PORTAL MONITORS



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HS-VGAM – Portal vehicle for scrap yards

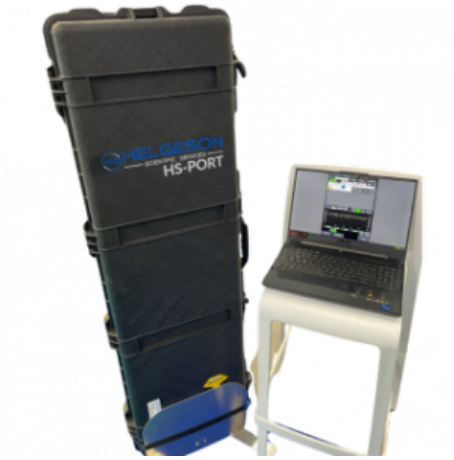
The HS-VGAM unit is an automated multitasking device, designed for the detection and measurement of gamma radiation on potentially exposed material, transported in vehicles.

It is particularly suitable fort he detection of radioactive sources in loads of raw materials, scrap and waste materials.

HS-PORT – Portable Gamma Portal monitor for personnel and vehicles

The HS-PORT has been designed for the detection and measurement of gamma radiation on potentially contaminated personnel, vehicles, etc.

It has a very fast deployment (one person in 2 minutes) and can be used in several applications like emergency response, monitoring of critical facilities, monitoring of events like concerts, sport events, etc. The system is operated remotely with a mobile phone or laptop without any additional cable connection.



HS-PoNaI

- Detectors:
  - NaI scintillation detector (can be customized: CsI, LaBr, CeBr, etc.)
  - Number of detectors: 1 detector (can be upgraded to 2 detectors)
  - Detector size: 4x4x16 inches (3x5x16” also available)
  - Energy range: 40 keV – 3 MeV
- Electronics:
  - Plug-in MCA with 2048 channels
  - Automatic gain stabilization
- Other features:
  - PC with Windows 11
  - Software for isotope identification and quantification
  - Spectrums displayed in real time, can be saved to be analyzed later
  - GPS
  - Hard disk memory up to 125 Gb
  - Remote connection with tablets, PCs, etc.
  - Dimensions: 730 x 160 x 170 mm approx.
  - Weight: 25 kg
  - Power: 220 – 115 V , 10 – 36 VDC
  - Battery bank to work autonomously
  - IP67

HS-PoNaI is a fantastic solution for a quick and efficient **in-situ isotope identification** in different applications. It is a strong and customizable equipment with a very simple and intuitive operation thanks to its automatic isotope identification and quantification software. It is equipped with a 4 liters NaI detector (4x4x16”), and all electronics are installed inside a PeliCase providing IP67 protection. Communication can be done remotely via tablet or another device.

WASTE & RECYCLING MANAGEMENT

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HS-DRUM – Waste characterization system for drums

HS-FRM – Free release monitor for drums, containers and big bags

HS-OTM – Object and tool monitors for objects monitoring

Complete storage and treatment plant for NORM wastes

Descaling system for NORM waste

Soil segregation unit