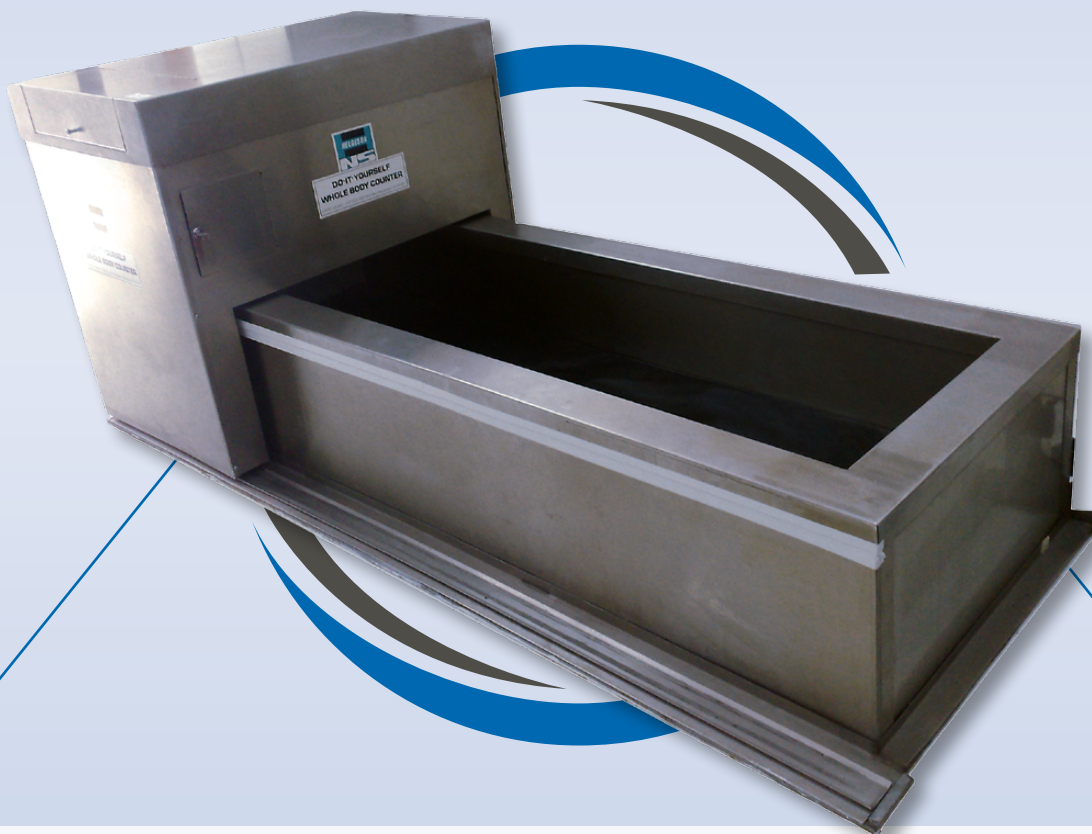


THE “DO-IT-YOURSELF” WHOLE BODY COUNTER

- A true Whole Body Counter
- Based on Classic Shadow Shield, but compact, fits in small rooms
- Quantitative and Qualitative analysis
- “Profile” data provides approximate location of gamma emitters
- Background monitored continuously except during count
- Computer adjustable scanning speeds
- May be used optionally with Magnetic Cards or Bar Codes, etc.
- Multi language software (English, French, Spanish, German, Dutch, Portuguese, etc.)



Compact and easy to operate, the Helgeson “Do-it- Yourself Whole Body Counter” offers a low cost means of ensuring safety for personnel at nuclear facilities, laboratories, or hospitals. The “Do-It-Yourself Whole Body Counter” measures the total body burden of gamma emitters and also approximates where the emitters are deposited within the body. The Helgeson “Do-It-Yourself Whole Body Counter” employs a scanning geometry, long recognized as the geometry which produces the lowest errors due to non-uniform source distribution. Its positional response is far superior to any chair or organ counter. Helgeson supplies analytical software, proven superior over many years, which provides qualitative and quantitative analysis of radioactive depositions. Our graphical representation of the data allows a technician to determine the quality of the evaluation.

Software for the “Do-It- Yourself, Whole Body Counter” is “user-friendly” with a menu format which provides a variety of standard and optional operating programs. System performance software includes a Quality Assur-

ance program which checks the electronics of the NaI(Tl) counter, reporting any errors to the operator. An Energy Calibration program allows the gain of the detector-amplifier system to be adjusted to uniformity and conformity to the design parameters.

Helgeson can provide a complete turn-key whole body counting system or any portion thereof, including all necessary hardware, software, operating procedures, instruction manuals, installation and training. The equipment is designed to provide the customer with a high quality, quantitative, low-maintenance whole body counter 24 hours a day, 365 days a year.

Helgeson can also provide the "Classic Shadow Shield Whole Body Counter" in which the subject moves beneath a stationary detector. The system uses the same software as the "Do-It-Yourself Whole Body Counter". Ask for details.

Description:

The Helgeson "Do-It-Yourself Whole Body Counter" allows a variety of analyses to be performed including counts for mixed fission products, thorium, 226 radium, as well as routine energy calibrations. The "Do-It-Yourself" system features a continuous background monitoring capability which reduces counting time and increase accuracy. Electronic components are chosen for long term unattended operation and stability. The system is interfaced to a micro-computer which serves as a multichannel pulse height analyzer, a multiscaling analyzer, and a data processing unit, as well as a general purpose scientific computer. Various configurations are available, depending upon customer needs.

Physical Specifications:

- Height: 110 cm
- Width: 110 cm
- Length: 260 cm
- Weight (approx): 3900 kg

Detectors:

- Option 1: NaI(Tl), 20x10 cm
- Option 2: HPGc
- Option 3: 4 x NaI(Tl) 10x10

Power requirements:

- 105-125 volts AC: 60 Hz, 10 Amp
- 200-250 volts AC: 50 Hz, 5 Amp

Environmental requirements:

- Temperature max: 16 - 40°C
- Humidity: 30%-80% noncondensing

Shielding (LEAD)

- 10-cm around the detector(s) (adjustable)
- 5-cm bed sides and bottom (adjustable)

Software

- Data Acquisition, continuous spectral display
- Data Analysis with graphs of original data and residuals
- Calibrations: Energy vs. Channel and Efficiency
- Parameter Modification for complete control: acquisition, analysis & miscellaneous parameters
- File Maintenance
- Miscellaneous Utility Programs

