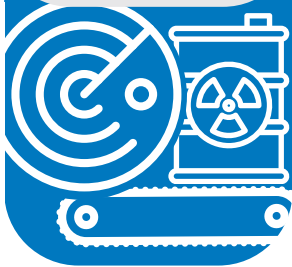




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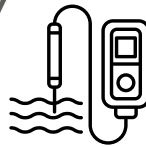


HERMES UW

SUBMERSIBLE HIGH-RANGE GAMMA SPECTROMETER
AND DOSE RATE METER



Accurate gamma spectrometry
at extreme count-rates



IP68 detector suitable for
underwater operation



Extended range
dose rate measurement

High-resolution $\text{LaBr}_3(\text{Ce}^{3+})$
with SiPM

Real-time isotopic ID
and spectra

Wide-range GM detector
for dose measurement

Decontaminable IP68
stainless steel probe

Rechargeable battery, >10h
runtime

Advanced real-time data
visualization

HERMES UW is a high-performance system designed for radiological characterisation in demanding underwater environments, such as nuclear fuel storage and segmentation pools. Combining high-resolution gamma spectrometry with a wide-range dose rate meter, the system provides accurate, real-time measurements for efficient underwater radiation scanning campaigns.

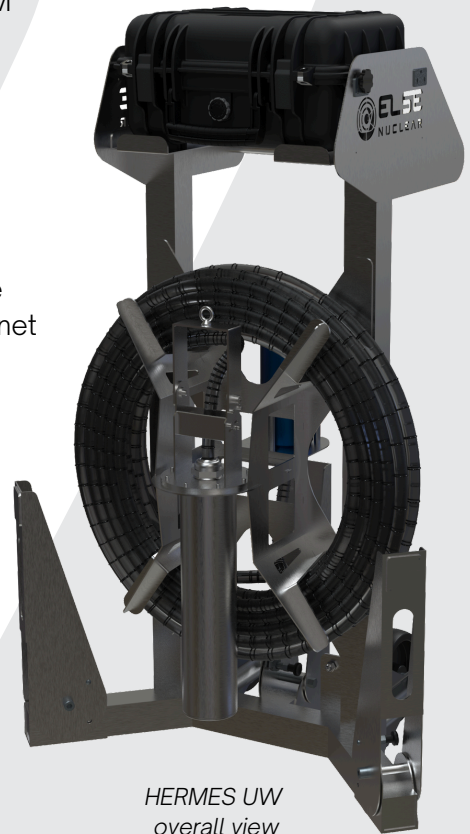
The detector and electronics are enclosed in an IP68-rated stainless steel housing (probe), ensuring complete protection and easy decontamination. The probe can be lowered into the water either manually or using existing crane systems, enabling flexible deployment in areas otherwise difficult to access.

Thanks to its excellent high-count-rate performance, **HERMES UW** delivers precise gamma spectrometry and reliable dose rate readings across a wide dynamic range, supporting accurate localization and identification of residual activity in underwater hot spots.

The system readout and control unit is housed in a portable case, which can be mounted on the included support frame (on the top or beside for operational flexibility). The frame is made of stainless steel for easy decontamination, and features extendable feet for increased stability that can be folded to reduce the footprint, as well as two wheels for an easy transport. A dedicated cable spool keeps the probe connection organized and secure during operation.

TECHNICAL SPECIFICATIONS

- Spectrometry detector: $\text{LaBr}_3(\text{Ce}^{3+})$ scintillator coupled to SiPM
 - Energy range: 30 keV – 2 MeV
 - Energy resolution: 3.3 % FWHM @ 662 keV
 - Gamma spectrometry range: from 100 nSv/h to 20 mSv/h
- Dose rate detector: wide range Geiger-Muller
 - Dose rate range: 0.1 $\mu\text{Sv/h}$ – 1 Sv/h
- Probe housing: IP68 stainless steel, decontaminable
- Operating temperature: 0 °C – 40 °C
- Main unit: portable control and readout module in rugged case
- Data communication to remote devices: RS-232 / USB / Ethernet
- Power supply: internal rechargeable battery
- Battery autonomy: up to 10 hours (continuous operation)
- Dimensions
 - Support frame: 68 x 50 x 115 cm (WxDxH)
 - Probe enclosure: 8 x 35 cm (ØxL)
- Weight
 - Support frame: < 40 kg
 - Probe: < 5 kg



HERMES UW
overall view

MAIN APPLICATIONS

- Underwater radiological surveys
- Hot-spot mapping in nuclear pools
- Decommissioning & segmentation in reactor basins
- Radiological control of waste handling and storage



HERMES UW
submersible IP68 probe



HERMES UW control unit detail

OPTIONS

- Extra range available on request: 0.1 $\mu\text{Sv/h}$ - 100 Sv/h

ACCESSORIES AVAILABLE UPON REQUEST

- Radiation-tolerant camera system for visual inspection of underwater areas
- Adjustable inspection pole for manual operation at various angles and depths
- Disposable protective sleeve preventing direct contact with contaminated water
- Warranty extension from 12 months to 24 months

