

Features

- Laboratory shield for high-resolution gamma spectrometry
- 10 cm thick lead with steel jacket
- Graded tin and copper liner
- Reduced-mass swing cover with variable opening direction
- Table with adjustable oversized foot pads
- Modular design for easy installation
- Compatible with both liquid-nitrogen and electrically cooled cryostats
- Visually pleasing ergonomic design
- Economy low-level versions available

Description

The LS series of lead shields is intended for use with laboratory HPGe detectors. Placing the detector inside a shield will reduce background counts due to external sources, thus reducing counting times and improving the lower limit of detection. The shields are compact and easy to use with only 600 x 600 mm of floor space required. Transport to the final location in the building and installation are facilitated by the modular construction with no part weighing more than 150 kg and strategically placed threaded holes for manipulation hooks. At the time of installation, the shield may be set up so that the cover opens right or left without the need for clearance to the rear. The cover features a special reduced-mass design making the opening and closing of the cover less strenuous. Minimal distance between the cover and the shield body prevents radiation streaming into the shield cavity.

The 1.0 mm tin and 1.5 mm copper graded liner prevents interference by secondary lead x-rays. The exterior is attractively finished with light grey polyurethane paint, the interior is coated with clear polyurethane to prevent oxidation and facilitate cleaning. The floor of the shield has a 95 mm (114 mm) diameter hole which will accommodate either flanged or slimline cryostats with relative efficiencies up to 50% (100%). The shield is delivered with a robust table with adjustable foot pads providing a convenient means for leveling and precise detector positioning within ± 50 mm. A back shield is optionally available for detectors with a remote detector chamber (RDC).

Economy versions for low-level measurements, LSxxxx/LL, are available with 75 mm bulk lead and 25 mm ULB lead insert (lower than 30 Bq/kg ^{210}Pb). For premium low-level measurement lead shields, please consult the LS/LL Classic Series Laboratory Lead Shields data sheet.



Specifications

- Mechanical
 - See drawing and table of dimensions below
- Shielding
 - LS Standard Series – 100 mm Pb
 - *LS/LL Economy Series – 75 mm Pb, 25 mm ULB Pb, $a(^{210}\text{Pb}) < 30$ Bq/kg*
- Liner
 - Sn, 1.0 mm
 - Cu, 1.5 mm
- Finish
 - Light grey (RAL 7035) polyurethane paint

Options

- Split back shield for RDC-4 detectors, 10 cm long, felt lined
- Simple detector lift for CP-5 detectors
- Advanced detector lift for CP-5 detectors

Ordering Information

- Custom features such as non-standard lead and/or liner thickness, lead purity, liner material, and dimensions, need to be agreed with the factory.
- Information about the type and size of specimen/containers to be measured, e.g., Marinelli beakers, must be included in the order.
- Information about the detector to be used must accompany the order.

