

Atomlab 400 Dose Calibrator

Code: 086-335

Overview

New low pressure chamber. Atomlab Dose Calibrators are shipped air or ground as standard goods.

The Atomlab™ 400 provides fast, accurate radionuclide activity measurements with performance that easily complies with the most stringent regulatory requirements.

The unit is simple to operate. There is a routine list of ten pre-programmed isotopes plus another seven that are user selected from the library. The library contains 88 isotopes listed alphabetically, including Y-90 and Sr-89. Four isotopes are displayed at a time.

Activity is displayed on a LCD panel in either Curie or Becquerel units. Background correction is performed at the touch of a button. Range selection is automatic.

Activity measurements are performed by a microprocessor-controlled electrometer located within the detector assembly of the ionization chamber. The chamber is shielded with .25" (6.3 mm) lead. It can be located up to eight feet away from the display unit. Chamber bias is generated within the display unit by an electronic high voltage supply, eliminating the need for expensive battery changes.

The RS-232 port enables the Atomlab 400 Dose Calibrator to communicate with most commercially available nuclear medicine management systems.



Features

Designed for facilities receiving unit doses including PET and Beta

- Pre-programmed for 88 most commonly used radionuclides
- Large, easy-to-read backlit LCD
- Small footprint economizes workspace
- Ultra-fast response
- Automatic range selection; ranges up to 40 Curies of Tc-99m or 10 Curies of F-18
- Displays in Curies or Becquerels
- Remote Ionization Chamber
- Self-Diagnostic Software
- Desktop or wall mount display
- Two-year warranty
- RS-232 bi-directional serial communications port

Specifications

- Isotope Selection Keys: Ten pre-programmed – Tc-99m, Tl-201, Co-57, Cs-137, I-131, In-111, Ga-67, Xe-133, I-123, and Mo-99; seven additional keys for user-set isotopes; two new isotope keys and a full alphabetical list of 88 isotopes.
- Activity Range: 0.01 μ Ci to 40 Ci (.0004 MBq to 1500 GBq) of Tc-99m or 10 Ci of F-18
- Energy Range: 25 keV to 3 MeV photons
- Response Time: One to two seconds for doses greater than 200 μ Ci; three seconds for doses greater than 20 μ Ci; 50-100 seconds below 20 μ Ci of Tc-99m with default threshold, threshold adjustable to reduce counting time
- Detector Linearity: $\pm 1\%$ or 0.2 μ Ci, whichever is greater
- Electrometer Linearity: $\pm 1\%$ or 0.2 μ Ci, whichever is greater
- Electrometer Accuracy: $\pm 1\%$ or 0.2 μ Ci, whichever is greater
- Overall Accuracy: $\pm 3\%$ or 0.3 μ Ci, whichever is greater; overall accuracy is affected by such factors as the accuracy of the specific source calibration, geometric variations due to sample volume or configuration, detector linearity, electrometer accuracy and readout accuracy
- Repeatability: $\pm 0.3\%$ above 1 mCi short term (24 hr); 1% long term (one yr); exclusive of background
- Digital Calibration Dial: Four-digit LED dial display with increment/decrement keys to change the value; range is from 0.0 to 999.9
- Detector: Well-type pressurized ionization chamber, with Argon fill gas; well opening 2.75" (7 cm), well depth 10.25" (26 cm)
- Chamber Gas Pressure: 149KPa gauge (21.6 psig) at 20 degrees C or 250KPa absolute (36.3 psia) at 20 degrees C. IATA regulation 3.2.2.4 Exempts Gases of Division 2.2 from Dangerous Goods Regulations when transported at pressure less than 200KPa gauge (29 psig) at 20 degrees C. Device is shipped standard goods.

t 1300 gms-aus | f (02) 9567 5374 | w www.gms-aus.com abn 66 072 147 561
P.O. Box 115 Arncliffe NSW 2205

- Detector Shielding: .25" (6.3 mm) lead on all sides except top well opening; supplementary shielding available
- Chamber Bias: 355 ± 5 volts
- Environmental Operating Conditions:
 - Temperature: 0-40° C
 - Humidity: 0-90% rh, non-condensing
- Power Requirements: 100 to 240 VAC, 0.6 – 0.3 amps, auto switching; APS Power Supply (APS22ES-150160), for medical use.
- Line Frequency: 50/60 Hz; detachable line cord; built-in EMI filter and transient suppression
- Detector and Interface Cables: 8' (243 cm) long, six conductor cables (two carry power, two for chassis ground, two carry serial data for digital I/O)
- Display Unit:
 - Dimensions: 6.75" w x 6" depth x 5" h (17.1 x 15.3 x 12.7 cm)
 - Weight: 3.6 lb (1.64 kg); desktop or wall mountable
- Detector Unit:
 - Dimensions: 6" dia x 15.5" h (15.24 x 39.37 cm)
 - Well I.D.: 2.75" dia x 10.5" h (7 x 26.7 cm)
 - Well I.D. with Liner: 2.5" dia x 10.25" h (6.35 x 26 cm)
 - Lead Shielding: .25" thick (6.3 mm)
 - Weight: 35 lb (16 kg)
- Warranty: Two Year