

NEW ATOMLAB™ 400 DOSE CALIBRATOR

Designed for facilities receiving unit doses including PET and BETA



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



- *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*

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 can be user defined. Any four isotopes will be displayed at a time. In addition, there is a library containing 88 isotopes listed alphabetically, including Y-90 and Sr-89.

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.

SPECIFICATIONS:

Isotope Selection Keys: Ten pre-programmed – Tc-99m, Co-57, Cs-137, I-131, In-111, Ga-67, Xe-133, I-123, Tl-201, and Mo-99; seven additional keys for user-set isotopes; two new isotope keys and a full alphabetical list of 88 isotopes.

Activity Range: 0.1 μCi to 40Ci (.001 mBq to 1500 GBq) of Tc-99m

Energy Range: 25 keV to 3 MeV photons

Response Time: One to two seconds for doses greater than 200 uCi; three seconds for doses greater than 20 uCi; 50-100 seconds below 20 uCi of Tc-99m with default threshold, threshold adjustable to reduce counting time

Detector Linearity: $\pm 1\%$ or 0.2 μCi , whichever is greater

Electrometer Linearity: $\pm 1\%$ or 0.2 μCi , whichever is greater

Electrometer Accuracy: $\pm 1\%$ or 0.2 μCi , whichever is greater

Overall Accuracy: $\pm 3\%$ or 0.3 μCi , 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.

Detector Shielding: .25" (6.3 mm) lead on all sides except top well opening; supplementary shielding available

Chamber Bias: 355 \pm 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)

Approvals: ETL to UL 60601-1 and cETL to CAN/CSA C22.2 No. 601-1-M90



This product is available through:

JRT Associates

800-221-0111



The Atomlab™ 400 display can be mounted on a wall or placed on a desktop.

086-335 Dose Calibrator, Atomlab™ 400,
100-240 VAC
Includes: smart display, ionization chamber,
RS-232 port, vial/syringe dipper and well insert.

Related:

- 086-336** Chamber, Dose Calibrator
- 086-338** Dose Calibrator Shielding Rings,
Interlocking, 2.25" lead
For additional protection from
high energy activity
- 086-423** Moly Shield, Vial, .3" lead
- 086-435** Moly Shield, Syringe, .3" lead
- 086-509** Lineator
- 086-334** Cable, European to Wall Outlet

Replacement:

- 086-242** Vial/Syringe Dipper
- 086-241** Well Insert

An industry exclusive two-year warranty is standard.