"The Clinical Advantage"™

NEW

ATOMLAB™ 500

Dose Calibrator

An extensive selection of quality assurance applications streamlines and simplifies hot lab administration requirements.

For NUCMED

For PET

For βETA

BIODEX

www.biodex.com

1-800-224-6339

Int'l 631-924-9000

ATOMLAB™ 500 DOSE CALIBRATOR

New Improved performance, reliability and accuracy.

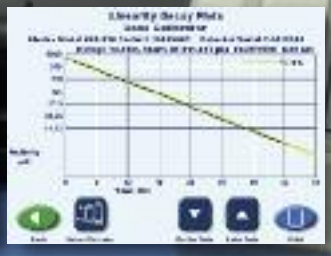
One dose calibrator for all your requirements.

- *Easy to use, large color touch screen with intuitive menus*
- *Automatic range selection; ranges up to 40 curies of Tc-99m or 10 curies of F-18*
- *Pre-programmed for 88 most commonly used radionuclides; any 12 can be conveniently touch selected*
- *Displays in curies or becquerels*
- *Small footprint economizes workspace*
- *Ultra-fast response*
- *Robust software and extensive functionality*
- *Remote Ionization Chamber*
- *One wipe counter and up to six ionization chambers can be connected*
- *Quality Assurance Programs*
  - *Constancy*
  - *Expanded constancy*
  - *Linearity and auto-linearity*
  - *Accuracy*
  - *Geometry*
- *Nuclear Pharmacy Applications*
  - *Future dose computation*
  - *Volume determination*
  - *Inventory control of 25 samples, correcting volume, activity and moly concentration*
- *Report and label printers available*
- *Self-diagnostic software*
- *Desktop or wall mount display*
- *Two-year warranty*
- *RS-232 bi-directional serial communications port*

EASY UPDATE

The Atomlab 500 Dose Calibrator is upgradable. You can easily install software updates via the Biodex website or by using a convenient memory card.

Constancy Activity



Linearity Decay

Geometry Test

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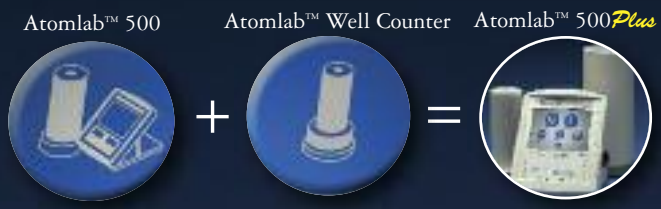

Combine the Atomlab™ 500 Dose Calibrator with the Atomlab™ Well Counter and create a complete, efficient and cost effective radioactivity measurement system... the ***Atomlab™ 500Plus***

...It's a complete Hot Lab Management System

For NUCMED

For PET

For βETA

The Atomlab™ 500

The Atomlab 500 provides fast, accurate radionuclide activity measurements with performance that easily complies with the most stringent regulatory requirements. The system consists of a new low pressure ionization chamber with redesigned seal, electrometer with extraordinary linearity and an auto-ranging touch screen color display. Now one dose calibrator can be used for a wide variety of nuclear medicine, PET and radioimmunotherapy applications. Additionally, there are advanced, but easy-to-use programs for nuclear pharmacy, radiochemistry and radiochromatography.

Activity measurements are performed by the microprocessor controlled electrometer located within the chamber assembly. 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 by an electronic high voltage supply, eliminating the need for expensive battery changes.

Every element of the design and technical development will increase dose accuracy, department productivity and regulation compliance. The attractive and intuitive human interface guides the user through each operation. Software can easily be updated via the Biodex website or by using a convenient memory card. The touch-screen display can rest on a bench or mount on the wall of a hot lab, hot cell or laminar flow hood.

In addition to powerful self diagnostics, the Atomlab 500 includes an exclusive chamber monitoring technology to assure longer life and accuracy. Integrated pressure and temperature sensors feedback data so that the influence of gas pressure change will not effect an accurate reading.

OPERATION

The system is easy to use. There are 12 isotope selection touch keys pre-programmed for the most commonly used radionuclides. Any of those keys can be reprogrammed by the user for a desired isotope. There are 88 isotope-specific dial values listed in memory. Dial values can easily be changed if required.

Activity is displayed on the touch screen color display in either curie or becquerel units. Background correction is performed at the touch of a button. Range selection is automatic, from .01 microcurie to 40 curies of Tc-99m or 10 curies of F-18.

ACCURACY

Atomlab Dose Calibrators have consistently proven to be highly accurate. Biodex and chamber manufacturer SNC have participated in the isotope program sponsored by NIST. Each month a certified isotope is received from NIST and is measured in the Atomlab™ Dose Calibrator, producing direct traceability to NIST.

QUALITY ASSURANCE

The Atomlab 500 has been designed to make life easier. The extensive selection of quality assurance applications streamlines and simplifies hot lab administration requirements. The system stores and decay corrects multiple reference sources and compares the measured activity to the calculated activity for the daily constancy test.

Manual linearity tests can be performed in the traditional method. Or, by using the automated program, a source can be placed in the chamber and readings will be taken and automatically recorded at the intervals designated.

The attenuation tube test for linearity can be performed using software that will guide the procedure, store all values and make all calculations.

COMMUNICATIONS

The RS-232 bi-directional serial port enables the Atomlab 500 Dose Calibrator to communicate in real time with most commercially available nuclear medicine management systems.

DATA DOWNLOAD

The Atomlab™ Data Manager is available as an option. The Windows™ based utility allows wipe test and dose calibrator QA results to be downloaded using a USB/serial converter. The results can be viewed and printed from the data manager software as required. In addition, information stored in the data manager can be exported into Microsoft® Excel or to department management systems.

www.biodex.com/dosecalibrators

Biodex Medical Systems, Inc has been providing customers with innovative products and service excellence for 60 years. Our dedicated employees work as a team to bring the promise of functional and elegant design to life. At Biodex, customer satisfaction drives every decision. Our quality equipment and unsurpassed customer service, training and support allows you to forget about the product and focus on the patient...that's ***"The Clinical Advantage."***™

ATOMLAB™500 DOSE CALIBRATOR

Finally, one dose calibrator that can be used for a wide variety of nuclear medicine, PET and radioimmunotherapy applications.

NUCLEAR PHARMACY

The Atomlab 500 provides inventory control for 25 samples, storing and correcting the volume, activity, and moly concentration. The system will perform both volume and future dose calculations. In addition to inventory management, the Atomlab 500 provides quality assurance and record keeping functions. The inkjet printer allows hard copy records to be produced for all functions. The label printer allows the user to print labels for the syringe or vial.

RADIOCHROMATOGRAPHY

The radiopharmaceutical quality control program is exceptional. The Atomlab 500 performs all counting and calculations for paper chromatography tests, computing the percentages of free pertechnetate, hydrolyzed reduced Tc-99m and labeled radiopharmaceuticals.

RADIOCHEMISTRY

Up to seven ionization chambers, or six ionization chambers and a well counter can be connected via daisy chain to a single display. The activity in each detector can be selected and viewed from the single display.

*Atomlab 500**Plus** with additional chambers.*

The Atomlab™ 500 display can be mounted on a wall or placed on a desktop.

QA Page

Accuracy Test

SPECIFICATIONS:

Display: LCD Touch Panel 6.5" x 5", function keys are displayed for the operation being performed
Connectors: RJ-12 for well cable, USB for printer
Power: This system uses XP Power Supply for Medical Use,
Model #PDM60US15
Line Voltage: 100 to 240 VAC, auto selectable by the power supply, 1.5-0.75 amps
Line Frequency: 50/60 Hz, detachable line cord, built-in EMI filter and transient suppression
Auxiliary Port: RS-232 connector, used for data export and firmware updates
Memory: Stores: Inventory and QA tests
Isotope Selection Keys: Twelve pre-programmed – Tc-99m, Tl-201, I-123, I-131, Cs-137, Co-57, Xe-133, Ga-67, In-111, F-18, Y-90, Mo-99; 25 user-defined isotopes and a full alphabetical list of 88 isotopes.
Activity Range: : 0.01 uCi to 40 Ci (.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: ± 1% or 0.2 µCi, whichever is greater
Electrometer Linearity: ± 1% or 0.2 µCi, whichever is greater
Electrometer Accuracy: ± 1% or 0.2 µCi, whichever is greater
Overall Accuracy: ± 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: ± 0.3% above 1 mCi short term (24 hr); 1% long term (one yr)
Digital Calibration Dial: Four-digit dial 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). Up to seven chambers can be serially connected to one display.
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 ± 5 volts
Environmental Operating Conditions: Temperature: 0-40° C; Humidity: 0-90% rH, non-condensing
Power Requirements: 100 to 240 VAC, 0.38 – 0.15 amps, auto switching; XP Power Supply (PDM60US15), 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 chassis ground; two carry serial data for digital I/O)
Display Unit:
Dimensions: 9.5" w x 12" depth x 12" h (24.1 x 30.5 x 30.5 cm)
Weight: 6.3 lb (2.9 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" lead (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
Warranty: Two-year

An industry exclusive two-year warranty is standard.

For physics tests, testimonials and warranty information, visit us on the web www.biodex.com/dosecalibrators

Dose Calibrator Accessories

Moly Assay Shield

Moly Assay Shields will fit into the well chamber of any Atomlab Dose Calibrator

Vial/Syringe Dipper

This rugged,Vial/Syringe Dipper has a comfortable handle and it will hold 1 cc to 10 cc syringes or up to a 30 ml vial.

Lineator

The Lineator is a simple device to accurately and reliably verify the linearity of your dose calibrator. Test results are available in minutes, without waiting days for decay, making it feasible to perform a linearity test more often. Early identification can prevent problems before they occur.

Copper Syringe Dipper

Designed for use with I-123 and In-111, the Copper Dipper removes variation in readings caused by attenuation differences from different materials and thicknesses used in syringes and vials.

Syringe Dipper

The BEXXAR Syringe Dipper will hold a 60 cc syringe in the correct position in most commercial dose calibrators with 2.5" x 10" well chamber interior.

Dose Calibrator Shielding Rings

The Dose Calibrator Shielding Rings offer an additional 2" of lead shielding around the remote chamber for working with 511 keV radionuclides, such as FDG F-18.

Well Insert

The Well Insert is included with the purchase of any Atomlab Dose Calibrator. The durable, clear Plexiglas insert is designed to protect the chamber from contamination and can be easily removed for cleaning. The insert will fit any well chamber with 2.5" x 10" interior dimension.

086-330 Dose Calibrator, Atomlab™ 500, 100-240 VAC $6,600.00
Includes: RS-232 port, vial/syringe dipper and well insert.

Related:
086-333 Software, Atomlab™ 500 Data Manager $100.00
086-334 Cable, European to Wall Outlet 15.00
086-336 Chamber, Dose Calibrator 5,500.00
075-594 Counter, Atomlab™ Well 2,950.00
086-337 Printer, Dot Matrix (label) 495.00
086-339 Printer, Ink Jet (report) 250.00
086-338 Shielding Rings, Interlocking, 2" lead.....2,300.00
For additional protection from high energy activity
086-243 Copper Dipper, Vial/Syringe 250.00
086-423 Moly Shield, Vial, .3" lead.....125.00
086-435 Moly Shield, Syringe, .3" lead 425.00
086-509 Lineator 495.00

Replacement:
086-242 Vial/Syringe Dipper $70.00
086-241 Well Insert.....70.00
086-278 Ribbon, Printer, 4/pkg.....18.00
086-268 Labels, "Peel & Stick", 200/roll 42.00

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