

Atomlab™ 930 Thyroid Uptake System

COMPLETE, MOBILE, SELF-CONTAINED SYSTEM:

- Keyboard controlled microprocessor with LCD display and serial printer
- 256-channel microprocessor-controlled multi-channel analyzer
- Programs for thyroid uptake, wipe test, Schilling test, bioassay, manual MCA
- 2" x 2" NaI(Tl) detector with collimated shield (meets IAEA specifications)
- Distance measurement rod (detector-to-patient)
- Separate connections for probe and optional well counter for fast, convenient changeover
- Mobile stand with variable-height counterbalanced arm (for seated or supine patients)
- One-year warranty



COMPREHENSIVE ATOMLAB TESTING AND UTILITY PROGRAMS:

Thyroid Uptake Program

- Supports multiple time-stamped uptake measurements
- Auto decay correction (or recount of standard)
- Outputs reports, stores data on 25 patients (up to four studies each)

Wipe Test Program

- Complies with current regulatory standards
- Automatic subtraction of background activity
- Calculates and reports individual wipe data on multiple wipe locations in user-defined areas

Schilling Test Program with reports for use with a variety of commercial kits

Bioassay Program with report for employees and/or patients

Manual MCA Program with report for performing sample counts and analysis beyond the scope of the standardized programs

- Pre-programmed with seven commonly used isotopes - I-123, I-125, I-131, Co-57, Cr-51, Tc-99m, Cs-137
- Provision to add a user-defined isotope, and to change any pre-programmed isotope's region of interest

System Administration / Quality Assurance Program:

- Automatic daily calibration (including chi-square) with Cs-137 source, with report
- Automatic high voltage adjustment
- Automatic power up and self test

All reports include facility name and address



The Atomlab 930 is a versatile and cost-effective spectrum analysis system for performing uptake studies, bioassays, Schilling tests, wipe tests, and other user-defined tasks in the nuclear medicine environment. Engineered for mobility, durability, and efficiency, the 930 handles an array of clinical tests, safety compliance tasks, and system administration/QA procedures. A powerful microprocessor guides the user through procedures, automatically performs necessary calculations, and outputs clear, concise reports. The system's internal memory stores results on up to 25 patients (up to four studies per patient).

The self-contained 930 system is configured on a mobile platform with locking casters and a base that measures only 30" by 31.5" (76 x 80 cm). A two-tiered shelf supports the microprocessor/keyboard and printer. The base of the stand has a special shelf to hold an optional well counter. A 2" x 2" NaI(Tl) detector with collimator articulates on a counterbalanced arm. Twenty-two inches (56 cm) of vertical travel allows the probe to be positioned up to 55" (140 cm) from the floor to accommodate seated or supine patients. The probe swings more than 180° on the horizontal plane, and extends outward up to approximately 34" (86 cm) from the support column. This design makes positioning for uptake studies simple and comfortable for both patient and technologist, and allows the unit to be easily moved for a variety of applications or storage. The system's multi-channel analyzer has 256 channels, with separate input connections for the probe and optional well counter. The system's embedded software has specialized programs for thyroid uptake, bioassay, wipe test, Schilling test, manual (user-defined) rate counts, system administration and quality assurance, and start-up self test. Programs print out concise, easily interpreted reports.

DISTRIBUTED BY:



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Atomlab™ 930 Thyroid Uptake System

SPECIFICATIONS:

MEDICAL SPECTROMETER HARDWARE:

Multi-Channel Analyzer

- Channels: 256
- Inputs: Probe and well
- Spectral Resolution: FWHM 10%
- Count Rate: (Maximum) 100,000 cps
- Count Rate Stability: 99%
- Gross Count Rate Linearity: Within 5% up to 100,000 cps
- Pulse Height Linearity: Within 2% (independent of detector)
- Connectors: Signal (BNC); High Voltage (MHV)
- Power Supply: Regulated from 775-1225 VDC at 2 mAmps
- Detector High Voltage Adjustment: Automatic H.V. adjustment for both probe & well; uses 10 µCi Cs-137 as the calibration source
- Amplifier Gain: Automatic/User-defined; contains built in pre-amplifier for direct connection to tube base; automatic gain switching with isotope selection: 1, 2, 4, 8, 12, 48
- Radionuclide: Seven pre-selected radionuclides: I-123, I-125, I-131, Co-57, Cr-51, Tc-99m and Cs-137; also one user-identified isotope selection
- Energy Level Discriminators: Preset/User-defined LLD-ULD
- Preset Time: 0-9999 seconds
- Clock Speed: 10 MHz (MCA)
- Display: LCD 2 line
- Viewing Area: 154 mm w x 15.3 mm h
- Characters: 3.2 mm w x 4.85 mm h
- Printer Output Port: RS-232 serial port
- Processor:
 - MCA Processor: DSP, 10 M.I.P.S.
 - Micro Controller: 12 MHz
 - (keyboard, display, printer)
- Dimensions: 12" w x 14" l x 3.5" h (31 x 36 x 9 cm)
- Weight: 8 lb (3.6 kg)
- Power: 115/230 VAC, 50/60 Hz
- Printer: Serial printer with 32K memory

OTHER HARDWARE:

Probe

- 2" x 2" NaI (TI) integral line scintillation detector with tube base

Uptake Stand

- Dimensions: 39" l x 30" w x 62" h (99.1 x 76.2 x 157.5 cm)
- Arm: Counterbalanced, two section arm, moves 22.5" vertically and extends 29" horizontally from stand's vertical column
- Casters: 3" maxi-lok
- Weight: 296 lb (134.3 kg)
- Shipping Weight: 384 lb (174.1 kg)

187-246 Well Counter

- Detector: 2" x 2" NaI (TI) integral line detector with a .75" diameter x 1.44" deep well (1.9 x 3.7 cm)
- Lead Shielding: 1" thick (2.5 cm)
- Cover: .125" thick (.32 cm)
- Connectors: Signal (BNC), High Voltage (MHV)
- Weight: 54 lb (24.5 kg)



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- 187-010 Thyroid Uptake System, Atomlab™ 930, Mobile, 115 VAC
Mobile System includes:
- 256 channel multi-channel analyzer with printer
 - 2" x 2" tube assembly and base
 - Mobile support stand with collimator
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- 187-020 Thyroid Uptake System, Atomlab™ 930, Tabletop, 115 VAC
Tabletop System includes:
- 256 channel multi-channel analyzer with printer
 - 2" x 2" tube assembly and base
 - Tabletop stand with collimator
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Certification: ETL Listed to UL 2601 Std. and CAN CSA C22.2 No. 601.1-M90 and CE approved.



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