



PINESTAR

Technology, Inc.

Catalog 35
2017-2018



Nuclear Medicine & PET Instruments & Accessories

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Page 45



Are you looking for a Nuclear Medicine or PET item and can't find it?
Please let us know.
Our product line is frequently expanded and we may be able to assist you.

Catalog 35

2017-2018

Denver Colorado
Booth 751
June 10-14, 2017



Philadelphia Pennsylvania
Booth To Be Determined
June 23-27, 2018



SOCIETY OF
NUCLEAR MEDICINE
AND MOLECULAR IMAGING

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*Specifications and pricing are subject to
change without notice*

CRC®-55tR Dose Calibrator



Color LCD Touch Screen

- Large easy to read display
- Menu-driven, 8" color VGA touch screen interface that is easy to learn and use

Enhanced Software

- Supports dual chamber technology

Versatility

- Entering data through the custom touch screen interface is fast
- 28 programmable keys

Streamlined Quality Assurance

- Automated quality control tests and self-diagnostics are built-in with automatic zero and background subtraction

Two Year Warranty - US Only



SPECIFICATIONS:

Ionization Chamber: Type: Thin wall, deep well, high pressure

Fill Gas: 12 atm Ultra Pure Argon

Measurement Range: Type: Auto Ranging

Activity: 250 GBq (6 Ci), max.

Resolution: .001 MBq (.01 μ Ci), max.

Display Screen: Type: 8" VGA LCD color touch screen display

Format: Direct reading in Bq or Ci

Bq/Ci Reading: User selectable or fixed

Values Displayed: Nuclide name (Atomic symbol, Mass number), calibration number

Electrometer: Accuracy: Better than $\pm 2\%$

Linearity: Within $\pm 2\%$

Response Time: Within 2 sec., 4 to 16 sec. for very low activity samples

Repeatability: Within $\pm 1\%$ within 24 hours, during which time the calibrator is on all the time

Tests: Diagnostics: Full Test of program, system memories

Daily: Auto Zero, Auto Background Adjust,

Data Check, Accuracy and Constancy, Voltage Test

Enhanced: Linearity, Geometry, Strip QC

Nuclear Data: Nuclide Setting Keys: 28 programmable keys

System Memory: Over 80 nuclides (cal number and half-life)

Standard Source Data: System Memory: Co-57, Co-60, Ba-133, Cs-137

Standard Sources

Molybdenum-99 Assay: Methods: Canisters or CAPMAC

Measured Values: Mo-99 elution, Tc-99m, Tc-99m/Mo-99 Ratio

PC Port: Interface: RS-232 & USB

Compatibility: Standard NM Management Systems; Ethernet Interface

Optional Printer: Interface: RS-232 & USB

Type: Epson Roll, Epson Slip or Okidata full size dot matrix

Printing Options: Full size test reports or measured results on tickets

Power Requirements: 100-240 VAC (50/60Hz) 90 MA

Console Dims: Height: 9.5in, Width: 9in

Depth: 10.5in, Weight: 7.5lb

Chamber Dims: Height: 17.25in, Weight: 30lb

Diameter: 6.76in, Cable Length 12ft

Well Dia.: 2.4in, Well Depth: 10in

Power Cable: 6ft

CRC-55tR

Dose Calibrator

Includes: Ionization chamber, display screen, PC port, chamber well insert & syringe dipper

Optional Accessories:

086-241

086-240

PTI-PS

34-210

086-509

5130-0006

5130-2046

5430-0058

5430-0100

CRP-200

0670-0016

0670-0022

7900-0352

Replacement Chamber Well Insert

Replacement Vial/Syringe Dipper

Positron Shield for Dose Calibrator Chamber

Calicheck Linearity Kit

Lineator

Moly Assay Shield, Vial, .3" Lead

CAP-MAC-S Moly Assay Canister for Syringes

Epson Roll Printer

Epson Ticket Printer

Dose Tickets & Labels, 250/pk

Test Tubes for Samples. 250/pk

Test Tube Rack

Screen Protector, 5/pk

Dose Calibrator Accessories, refer to pages 11 - 13

Call Pinestar toll-free 1-800-682-2226, to place an order

CRC®-55tW Dose Calibrator



Best of Both Worlds

- An integration of the CRC-55tR Dose Calibrator and Well Counter with chamber plug-n-play capability

Precision

- Ion chamber is capable of measuring a dose as high as 6 Ci (250 GBq) with high accuracy

User-defined Counting Protocols

- Allows the user to define specific counting procedures (protocols) with trigger levels for work, patient, unrestricted areas and sealed source leak tests

Detailed Spectrum Analysis

- The well counter includes a 256 channel MCA which provides a detailed spectrum for identification and analysis
- Manual and automatic ROI selection are available

Two Year Warranty - US Only



SPECIFICATIONS:

Well Detector: Type: Sodium Iodide (NaI) drilled-well crystal detector
256 Channel MCA, manual and automatic ROI
Warning Trigger Levels: User-definable
Tests: Daily test, energy calibration, and reproducibility
Enhanced QC includes Chi-Square and MDA

Ionization Chamber: Fill Gas: 12 atm Ultra Pure Argon
Measurement: Auto ranging
Activity Range: Up to 6 Ci (250 GBq)
Resolution: .001 MBq (.01 μ Ci)
Response Time: Within 2 sec., for low activity sample, 4 to 16 sec. (user selectable)
Tests: Daily tests include Auto Zero, Background Adjustment, Voltage Test, Data Check, Accuracy and Constancy
Enhanced QC includes linearity, geometry, strip QC

Display Screen: Type: 8" VGA LCD color touch screen display
Bq/Ci Reading: User selectable or fixed
Activity Display: Selected radionuclide, calibration number, measured activity and display units (Bq/Ci)
Count Rate Values: Wipe and lab test results

Electrometer: Accuracy: Better than $\pm 2\%$ Linearity: Within $\pm 2\%$

Repeatability: Within $\pm 1\%$ within 24 hrs, during which time calibration is powered at all times

Molybdenum-99 Assay: Methods: Canister or CAPMAC
Measured Values: Mo-99 elution, Tc-99m, Tc-99m/Mo-99 Ratio

Nuclide Data: Nuclide Setting Keys: 28 programmable keys
System Memory: Over 80 nuclides (cal number and half-life)
A pre-set key measures up to 2.0 Ci (74.0 GBq) of F-18

Standard Source Data: System Memory: Co-57, Co-60, Ba-133, Cs-137

PC Port: Interface: RS-232 & USB

Compatibility: Standard NM Management Systems; Ethernet Interface

Optional Printers: Epson Roll, Epson Slip or Okidata dot matrix

Power Requirements: 100-240 VAC (50/60 Hz) 100 MA

Tests: Diagnostics: Full test of program, system memories

Console Dims: Height: 9.5in, Width: 9in
Length: 10.5in, Weight: 7.5lb

Chamber Dims: Height: 17.25in, Weight: 30lb
Diameter: 6.76in, Cable Length 12ft
Well Dia.: 2.4in, Well Depth: 10in

Well Counter Dims: Height: 9.38in, Dia: 6in
Weight: 15.2lb, Well Dia: .67in
Well Depth: 1.5in, Cable Length 9 ft

Cable: Power: 6 ft, Optional: Printer: 6ft

CRC-55tW

Dose Calibrator

Includes: Ionization chamber, display screen, well counter, PC port, chamber well insert & syringe dipper

Optional Accessories:

086-241

086-240

PTI-PS

34-210

086-509

5130-0006

5130-2046

5430-0058

5430-0100

CRP-200

0670-0016

0670-0022

5420-2072

5420-PET

0975-137R

7900-0352

Replacement Chamber Well Insert

Replacement Vial/Syringe Dipper

Positron Shield for Dose Calibrator Chamber

Calicheck Linearity Kit

Lineator

Moly Assay Shield, Vial, .3" Lead

CAP-MAC-S Moly Assay Canister for Syringes

Epson Roll Printer

Epson Ticket Printer

Dose Tickets & Labels, 250/pk

Test Tubes for Samples, 250/pk

Test Tube Rack

Auxiliary Shield for Well Counter Chamber

PET Auxiliary Shield for Well Counter Chamber

Cs-137 0.5 μ Ci Rod Source for Well Counter

Screen Protector, 5/pk

Dose Calibrator Accessories, refer to pages 11 - 13

Call Pinestar toll-free 1-800-682-2226, to place an order

CRC® -25R Dose Calibrator



28 Programmable Keys

- Calibration numbers for over 200 radionuclides are easily accessed by use of the Cal Key
- Includes a pre-set key for F-18 measurements

Nuclide Data at your fingertips

- Large character, high visibility display with auto backlighting
- All nuclide data is entered via the custom keyboard that includes eight preset and five user-definable keys

Streamlined Communication

- PC/Nuclear Medicine Manager Systems communicated via USB
- Optional printers interface via USB or RS232

Automated Decay-corrected Data

- Storage of five reference sources in memory that are automatically decay corrected for today's time and date



Two Year Warranty - US Only

SPECIFICATIONS:

Ionization Chamber: Type: Thin wall, deep well, high pressure

Dimensions: 10" D x 2.4" Dia

Cabling: 12' interconnecting cable

Measurement Range: Type: Auto Ranging

Activity: 250 GBq (6 Ci), max.

Resolution: .001 MBq (.01 µCi), max.

Display Screen: Type: Dot Matrix Liquid Crystal Display

Format: Direct reading in Bq or Ci

Bq/Ci Reading: User selectable or fixed

Values Displayed: Nuclide name (Atomic symbol, Mass number), calibration number

Electrometer: Accuracy: Better than $\pm 2\%$

Linearity: Within $\pm 2\%$

Response Time: Within 2 sec., 4 to 16 sec. for very low activity samples (user selectable average period)

Repeatability of Measurement: Repeatability: Within $\pm 1\%$ within 24 hours, during which time the calibrator is on all the time

Nuclear Data: Nuclide Setting Keys: 8 Pre-set, 5 user

System Memory: Over 80 nuclides (Calibration number and half-life)

A pre-set key measures up to 2.0 Ci(74.0 GBq) of F-18

Molybdenum-99 Assay: Methods: Canister or CAPMAC

Measured Values: Mo-99 elution, Tc-99m, Tc-99m/Mo-99 Ratio

Tests: Diagnostics: Full test of program, system memories

Quarterly: Daily, Accuracy and Linearity

Daily: Auto Zero, Auto Background Adjust, Data Check, Accuracy and Constancy

Standard Source Data: System Memory: Co-57, Co-60, Ba-133, Cs-137 Standard Sources

PC Port: Interface: RS-232C Protocol & USB

Compatibility: Standard Nuclear Medicine Management Systems

Optional Printers: Epson Roll, Epson Slip or Okidata full size dot matrix

Printing Options: Full size test reports or measured results on tickets

Power Requirements: 100-240 VAC (50/60 Hz) 90 MA

Console Dims: Height: 5.38in, Width: 10.25in

Depth: 10.5in, Weight: 3.9lb

Chamber Dims: Height: 17.25in, Weight: 30lb

Diameter: 6.76in, Cable Length 12ft

Well Dia.: 2.4in, Well Depth: 10in

Power Cable: 6ft

CRC-25R

Dose Calibrator

Includes: Ionization chamber, console, well insert & vial/syringe dipper

Optional Accessories:

086-241

Replacement Chamber Well Insert

086-240

Replacement Vial/Syringe Dipper

PTI-PS

Positron Shield for Dose Calibrator Chamber

34-210

Calicheck Linearity Kit

086-509

Lineator

5130-0006

Moly Assay Shield, Vial, .3" Lead

5130-2046

CAP-MAC-S Moly Assay Canister for Syringes

5430-0058

Epson Roll Printer

5430-0100

Epson Ticket Printer

CRP-200

Dose Tickets & Labels, 250/pk

0670-0016

Test Tubes for Samples. 250/pk

0670-0022

Test Tube Rack

Dose Calibrator Accessories, refer to pages 11 - 13

Call Pinestar toll-free 1-800-682-2226, to place an order

CRC® -55tPET Dose Calibrator



Ultimate Features in the Industry's Finest Package

- Touch screen interface
- Reduced chamber voltage and increased bias voltage increases the maximum activity range for high energy PET isotopes
- USB/Flash card capabilities for software upgrades and more
- Chamber Plug-n-Play
- Enhanced remote functionality
- Capable of assaying up to 20 mCi of F-18
- **Designed specifically for Cyclotron facilities**

User-defined Hotkeys

- Touch technology provides rapid selection of isotopes
- 28 programmable keys for site-specific keyboard layout

Enhanced Automated Software

- Facilitates rapid completion of quality assurance and self diagnostics
- Reference source data decay-corrected to current time/date
- Automatic zero and background subtraction



SPECIFICATIONS:

Ionization Chamber: Type: Thin wall, deep well

Fill Gas: 5 atm Ultra Pure Argon

Measurement Range: Type: Auto Ranging

Activity: 20 Curies of F-18

Resolution: 0.1 μ Ci (0.01 MBq), max.

Display Screen: Type: 8" VGA LCD Color Touch Screen Display

Format: Direct reading in Ci or Bq

Bq/Ci Reading: User selectable or fixed

Values Displayed: Nuclide name (Atomic symbol, Mass number), calibration number

Electrometer: Accuracy: Better than $\pm 2\%$

Linearity: Within $\pm 2\%$

Response Time: Within 2 sec., 4 to 16 sec. for very low activity samples

Bias Voltage: +500V

Repeatability of Measurement: Repeatability: Within $\pm 1\%$ within 24 hours during which time the calibrator is continuously on all the time

Nuclear Data: Nuclide Keys: 28 programmable keys

System Memory: Over 80 nuclides (Calibration number and half life)

Two Year Warranty - US Only

Overall Accuracy Determined By:

- 1) Calibration for the specific nuclide and the sample configuration
- 2) Accuracies of standard sources used for calibration of electrometer

Diagnostics: Full test of program, system memories

Tests: Daily: Auto Zero, Auto Background, Voltage Test, Data Check, Accuracy and Constancy

Enhanced: Linearity, Geometry

Standard Source Data: System Memory: Co-57, Co-60, Ba-133, Cs-137, Na-22 Standard Sources

PC Port: Interface: RS-232 & USB

Compatibility: Standard Nuclear Medicine Management Systems

Printer (Optional): Type: Epson Roll, Epson Slip or Okidata full size dot matrix
Printing Options: Full size test reports or measured results on tickets

Power Requirements: 100-240 VAC (50/60 Hz) 100mA

Console Dims: Height: 9.5in, Width: 9.0in

Depth: 10.5in, Weight: 7.5lb

Chamber Dims: Height: 17.25in, Weight: 30lb

Diameter: 6.76in, Cable Length 12ft (longer cables available)

Well Dia.: 2.4in, Well Depth: 10in

Power Cable: 6ft (longer cables available)

CRC-55tPET

Dose Calibrator - for Cyclotron Facilities

Includes: Smart Display, ionization chamber, RS-232 port, vial/syringe dipper and well insert

Optional Accessories:

086-241

086-240

PTI-PS

34-210

086-509

5430-0058

5430-0100

CRP-200

0670-0016

0670-0022

7900-0352

Replacement Chamber Well Insert

Replacement Vial/Syringe Dipper

Positron Shield for Dose Calibrator Chamber

Calicheck Linearity Kit

Lineator

Epson Roll Printer

Epson Ticket Printer

Dose Tickets & Labels, 250/pk

Test Tubes for Samples. 250/pk

Test Tube Rack

Screen Protector, 5/pk

Dose Calibrator Accessories, refer to pages 11 - 13

Call Pinestar toll-free 1-800-682-2226, to place an order

Atomlab™ 500 Dose Calibrator



- Windows® Operation System
- Large menu driven color display touch screen; can be used desktop or wall mounted
- Displays in Curies or Bequerels
- Preprogrammed for 89 most commonly used radionuclides; any 12 can be conveniently touch selected. Extensive isotope library includes Lu-177 and Ra-223
- Communicates with most commercially available NM management systems via ethernet or serial port
- Automatic range selection up to 100 Curies of Tc-99m or 25 Curies F-18
- USB ports accommodate a mouse, printing and software upgrades
- Report and label printers available
- Upgradeable at any time to include a wipe test counter
- Two-year warranty - US Only



SPECIFICATIONS:

Display: LCD Touch Panel 6.5" x 5", function keys are displayed for the operation being performed; can be used desktop or wall mounted
Dimensions: 9.5"W x 12"D x 12"H Weight: 6.3 lbs

Line Voltage: 100 to 240 VAC, auto selectable by the power supply

Line Frequency: 50/60 Hz, detachable line cord, built-in EMI filter and transient suppression

Auxiliary Port: Two USB ports, one RS-232 port

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, Ba-133
25 user-defined isotopes and a full alphabetical list of 89 isotopes

Activity Range: 0.01 µCi to 100 Ci (.0004 MBq to 3700 GBq) of Tc-99m or 25 Ci of F-18

Energy Range: 25 keV to 3 MeV photons

Response Time: One to two seconds for doses greater than 200 µCi; three seconds for doses greater than 20 µCi; 50-100 seconds below 20 µCi 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, up to 40 curies of Tc-99m, ± 1.5% up to 100 curies of Tc-99m

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 1mCi short term (24 hr); 1% long term (1 yr)

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

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

Power Requirements: 100 to 240 VAC, 0.38 - 0.15 amps, auto switching

Detector Unit: Dimensions: 6" dia x 15.5" H (15.24 cm x 39.37 cm)
Well Internal Dimensions: 2.75" dia x 10.5" H (7 cm x 26.7 cm)
Well Internal Dims with Liner:- 2.5" dia x 10.25" H (6.35 cm x 26 cm)
Lead Shielding: .25" lead (6.3 mm)
Weight: 35 lbs (16 kg)

Display Unit: 9.5" W x 12" D x 12" H; Weight: 6.3 lb; desktop or wall mountable

Certification: ETL to UL 60601-1 and cETL to CAN/CSA C22.2 No 601-1-M90
IEC 60601-1, IEC 60601-1-4 and IEC 60601-1-2 and CE marked

Warranty: Two years

086-330

Atomlab™ 500 Dose Calibrator, 100-240 VAC
Includes: Smart Display, ionization chamber, RS-232 port, vial/syringe dipper and well insert

Optional Accessories:

086-241

Replacement Well Insert

086-242

Replacement Vial/Syringe Dipper

ALD-PS

Interlocking Shielding Rings - Positron Shield

086-509

Lineator

34-210

Calicheck Linearity Kit

086-423

Moly Assay Shield, Vial .3" lead

086-435

Moly Assay Shield, Syringe .3" lead

086-341

Dymo Label Printer

Includes: one roll 086-343 labels; two rolls 086-344 labels

086-343

Blank Label, Lg, 300/roll

086-344

"Radioactive" Label, Sm, 260/roll, 2/pkg

086-339

Ink Jet Printer (report)

086-334

Cable, European to Wall Outlet

Atomlab™ 500Plus Dose Calibrator



One solution for all your molecular imaging needs, a combination of the Atomlab 500 with the Atomlab Wipe Test counter.

- Windows® Operating System
- Large menu driven color display touch screen; can be used desktop or wall mounted
- Communicates with most commercially available NM management systems via ethernet or serial port
- Preprogrammed for 89 most commonly used radionuclides; any 12 can be conveniently touch selected
- Automatic range selection; up to 100 Curies of Tc-99m or 25 Curies of F-18
- Remote shielded ionization chamber
- Ultra-fast response
- Displays in Curies or Becquerels
- 64 Channel MCA
- Remote shielded well
- Adjustable wide window and individual isotopes
- Energy spectrums with individual ROI
- Ability to help identify isotopes causing contamination
- 2x2 NaI drilled-well detector
- User-specific wipe locations and trigger levels
- Wipes that exceed trigger levels are immediately recognized
- Detailed wipe reports including cpm and dpm
- Wipe testing results stored
- USB ports accommodate a mouse, printing and software upgrades
- Optional report and label printers available
- Two-year warranty - US Only



0413

SPECIFICATIONS:

Atomlab 500 Dose Calibrator:
see page 6 for complete specifications

Atomlab Wipe Test Counter:
see page 8 for complete specifications

086-332

Atomlab 500Plus Dose Calibrator, 100-240 VAC
Includes: Smart Display, ionization chamber, well counter,
RS-232 port, vial/syringe dipper and well insert

Optional Accessories:

086-241	Replacement Well Insert
086-242	Replacement Vial/Syringe Dipper
ALD-PS	Interlocking Shielding Rings - Positron Shield
075-596	Wipe Test Chamber Lead Shield
086-509	Lineator
34-210	Calicheck Linearity Kit
086-423	Moly Assay Shield, Vial .3" lead
086-435	Moly Assay Shield, Syringe .3" lead
086-243	Copper Dipper, Vial/Syringe
086-341	Dymo Label Printer
	Includes: one roll 086-343 labels and two rolls 086-344 labels
086-343	Blank Label, Lg, 300/roll
086-344	"Radioactive" Label, Sm, 260/roll, 2 /pkg
086-339	Ink Jet Printer (report)
063-139	Rod Source, Cs-137, Calibrated, 0.1 µCi
006-350	Wipe Test Kits, 500/pkg
086-342	Well Liners, Disposable, 100/pkg
086-334	Cable, European to Wall Outlet

Dose Calibrator Accessories, refer to pages 11 - 13
Call Pinestar toll-free 1-800-682-2226, to place an order

Atomlab™ Wipe Test Counter



- Windows® Operating System
- Communicates with most commercially available NM management systems
- USB ports connect with external monitor and facilitate software upgrades
- 64 Channel MCA
- Adjustable wide window and individual isotopes
- 2x2 NaI drilled-well detector
- Remote shielded well
- Energy spectrums with individual ROI
- Ability to help identify isotopes causing contamination
- User-specific wipe locations and trigger levels
- Wipes that exceed trigger levels are immediately recognized
- Detailed wipe reports including cpm and dpm
- Wipe testing results stored
- Upgradable at any time to a dose calibrator by adding an ionization chamber
- Optional report and label printers available
- Two-year warranty - US Only



SPECIFICATIONS:

Display:		Well Counter:	
LCD Touch Panel:	6.5" x 5", function keys are displayed for the operation being performed	Dimensions:	6" diameter x 11" H (15.24 cm x 27.9 cm)
Dimensions:	9.5" W x 12"H x 12"D (24.1 cm x 30.5 cm x 30.5 cm)	Weight:	29 lbs (3.2 kg)
Weight:	6.3 lbs (2.9 kg) ; desktop or wall mountable	Detector:	2"x2" NaI (TI) integral line scintillation detector with a 0.75" dia x 1.44" depth well (1.9 cm x 3.7 cm)
Line Voltage:	100 to 240 VAC, auto selectable by the power supply	Style:	Remote Detector
Line Frequency:	50/60 Hz, detachable line cord, built-in EMI filter and transient suppression	Channels:	64
Auxiliary Port:	Two USB ports, one RS-232 port	MCA:	Integral to Well Counter
Memory:	Stores wipes, calibration, background, high voltage, isotope specification, isotope efficiency, Chi-Square testing results, technologist list, wipe locations list and latest MDA calculation Results can be displayed and printed	Spectral Resolution:	FWHM 10%
Preset Radionuclides:	27 including Tc-99m, Co-57, Cs-137, Ga-67, Tl-201, I-123, I-125, I-131, In-111, F-18	Count Rate:	(Maximum) 30,000 cps
		Connectors:	RJ-12 for power and signal
		Lead Shielding:	0.5" integral lead shield
		Certification:	ETL listed to UL 60601-1 and CAN/CSA C22.2 No. 601-1M90, IEC 60601-1, IEC 60601-1-4 and IEC 60601-1-2 and CE marked

086-331

Atomlab Wipe Test Counter

Includes: Smart Display, well counter and RS-232 port

Optional Accessories:

075-596

Wipe Test Chamber Lead Shield

063-139

Cs-137 Rod Source, Calibrated 0.1 µCi

006-350

Wipe Test Kits, 500/pk

086-342

Well Liners, Disposable, 100/pk

086-339

Ink Jet (report) Printer

086-333

Atomlab 500 Data Manager Software

086-336

Dose Calibrator Chamber

086-334

Cable, European to Wall Outlet

CAPRAC® -t



- 8" VGA-LCD color touch screen
- 256 Channel MCA manual and automatic ROI
- 1.5" Sodium Iodine (NaI) drilled-well crystal
- PC Port: Interface RS-232 and USB
- Readouts with spectrum display in cpm, dpm, Curies and Bequerels

SPECIFICATIONS:

Console Dimensions:

Height 9.5", Width 9"

Length 10.5", Weight 7.5 lb

Well Counter Dimensions:

Height: 9.28"H, Diameter 6"

Weight: 15.2 lb, Cable Length 9 ft

Well Diameter .67", Well Depth 1.5"

Crystal Dimensions: 1.5" x 1.75"

0.5" lead

Shielding:

Cables:

Power: 6ft,

Printer: 6 ft; longer cables are available

Power:

Standard: 110-240 VAC (50/60) Hz 25W



CAPRAC-t

Wipe Test/Well Counter

Optional Accessories:

0975-137R

Cs-137 0.5 μ Ci Rod Source

5430-0058

Epson Roll Printer

0670-0016

Test Tubes, 250/pk

7900-0352

Protective Screen Cover, 5 pk

5420-2072

Auxiliary Shield for Well Counter Chamber

5420-PET

PET Auxiliary Shield for Well Counter Chamber

5420-0121

Well Liners/Counting Tubes, 5/pk

Ludlum Model 2200 Scaler Ratemeter Ludlum Model 243 Well Counter



Model 2200 Specifications:

Detectors: GM, proportional, scintillation

Scaler: six-digit LED display providing a range of 0-999999 counts

Scaler Linearity: reading within 2% of true value

Timer: pushwheel adjustment from 0-999 minutes with selectable X0.1 and X1 multipliers

Ratemeter: 0-500,000 cpm total range

Meter Dial: 0-500 cpm, 0-2.5 kV, BAT TEST

Multipliers: x10, x100, x1000

Ratemeter Linearity: reading within 10% of true value

Response: toggle switch for FAST (4 seconds) or SLOW (22 seconds), for 10% to 90% of full scale deflection

Zero: pushbutton to zero meter

High Voltage: adjustable from 200-2500 volts (will support 60-megohm scintillation loads to 1500V)

Threshold: adjustable from 1.00- 10.00

Window: adjustable from 0 to 10.0 above the threshold setting (can be enabled or disabled)

Discriminator: adjustable from 2-100 mV at threshold setting of 1.00

RS-232: 9-pin connector allowing for printer or computer interface

Meter: 2.5" arc, 1mA movement analog type

Power: 95-250 Vac, 50-60 Hz or 4 "D" cell batteries

Battery Life: typically 120 hours with alkaline batteries (battery condition can be checked on meter)

Temperature Range: -20 to 50 °C, may be certified to operate from -40 to 65 °C

Size: 8.5"H x 5" W x 8.5" L, excluding handle

Weight: 7.5 lb, including battery

Model 243 Specifications:

Well: 0.7" Dia x 1.6" L

Detector: 1.8" Dia x 2" thick NaI(Tl) well scintillator

Sensitivity: will detect 0.005 μ Ci gamma or 200 dpm removable contamination for Tc-99m, I-131, TI-201, In-111, I-125, Cs-137 and Ga-67

Efficiency: (4PI): 80% for I-125, (I-125 efficiency is based on I-129 efficiency of 66%), 90% for Tc-99m, 33% for Cs-137, 43% for Co-60

Background: 1000 cpm or less [optional (0.5") lead sleeve for background reduction: Part No. 7379-004]

Operating Voltage: 500-1200 volts

Photomultiplier Tube: 2" diameter

Lead Shielding: 0.5" thick painted lead wall and removable cap

Size: Base- 8" L x 8" W

Body- 3.5" Dia x 11" H

Weight: 30 lb

Shipping Weight: 46 lb



051-220

Model 2200 Scaler/Ratemeter

187-243

Model 243 Well Counter, 1" lead

Dose Calibrator Accessories, refer to pages 11 - 13

Call Pinestar toll-free 1-800-682-2226, to place an order

Wiper™ Gold Premium Wipe Test Counter



- Menu driven software is easy to use
- The Wipe Library allows up to 40 different wipe locations
- Wipe test results can be displayed in CPM, DPM, Becquerels or Curies
- Wipes that exceed the trigger level are flagged and the isotope is identified
- Sample Volume Correction accommodates for different sample volumes
- Test Library holds 16 user definable tests
- Advanced circuitry accurately counts at rates over 300,000 CPM
- Built-in Decay Calculator decays a sample to any time; past or future
- 4096 channel MCA offers superior resolution to identify isotopes

SPECIFICATIONS:

Detector: NaI(Tl) drilled well crystal/PMT assembly

Analyzer: 4096 Channel MCA (12 bit), automatic dead time correction

Well Liner: Removable plastic well liner prevents detector contamination

Display: LED Backlit 4.5" LCD

Shielding: 0.75" virgin lead shielding, extending more than 3.5" beyond the bottom of the crystal

Output: Dual serial ports- output to a full page serial printer (optional) and a PC

Dimensions: Base unit: 10.5"W x 8.5" D x 4.75" H

Detector: 6" Dia x 10" H

Well Dimensions: 1.25" D x .669" Dia

Weight: 32 lbs

Power: 100-240VAC 50-60hz

LTIW100-P Wiper Gold
Includes 80 column thermal printer

LTIW100-NP Wiper Gold
Without Printer

0975-137R Rod Source
Cs-137 0.5 µCi

The Multi-Wiper™



- Comprehensive wipe testing with concise report in DPM
- Available with 1, 2, 3, 4, 5, 6, 8 or 10 wells
- Automatically identifies isotope window where high counts fall
- Pass/Fail based on user-programmable trigger levels
- Heavy shielding for low background readings
- Automatically calculates and reports MDA on each wipe test report
- 4096 channel (12 bit) analyzer for precise isotope identification
- Automatic linearity correction
- Automatic DPM calculation with AutoSpect™ (No sources needed)
- Programmed for Schilling, Plasma Volume, GFR and Red Cell Volume
- Exceeds all NRC and Agreement State Regulations for patient access areas
- Tremendous labor savings
- Very compact (occupies less than 20 inches of benchspace)
- Very economical

SPECIFICATIONS:

Detectors: NaI(Tl) drilled well crystal/PMT assembly

Analyzer: 4096 Channel MCA, automatic dead time correction

Well Liner: Removable plastic well liners prevents detector contamination

Display: LED Backlit 4.5" LCD

Shielding: 0.85" virgin lead shielding with E-lead to eliminate crosstalk with high energy isotopes

Dimensions: 20" W x 10.5" H x 13.5" D, less than 100 lb depending on model

Power 110/120 50/60 hz or 220-240 50/60 hz

LTIW1002 2 Well Counter
LTIW1003 3 Well Counter
LTIW1004 4 Well Counter
LTIW1005 5 Well Counter
LTIW1006 6 Well Counter
LTIW1008 8 Well Counter
LTIW1010 10 Well Counter

Full size printer included with all Multi-Wipers
(domestic only)

Printers for CRC Dose Calibrators and Wipe Test Counters



The **Okidata Microline™ 320i Printer** is for use with the CRC-25R, CRC-25W, CRC-55tR, CRC-55tW and CRC-127R. It is rated for 5000 hours and offers Near Letter Quality documents plus high resolution graphics with only 9 pins. **CE**

5130-0074 Okidata Printer, 120V



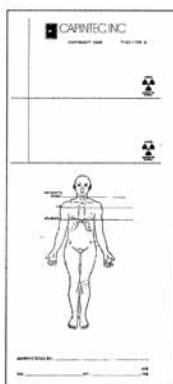
The **Epson Roll Printer** is for use with the CRC-25 and CRC-55t families of Dose Calibrators, CRC-Beta Enhanced Counter, CRC-127R Dose Calibrator and CAPRAC-T Well/Wipe Test Counters. This very compact printer is ideal in locations where space is at a premium. A built-in self-test function reviews the printers condition. The Epson model uses an easily accessible ribbon cartridge that prints Red or Black. **CE**

5430-0058 Epson Roll Printer
9282-0009 Paper rolls, 12/pk
2001-0055 Printer Ribbon, Red/Black

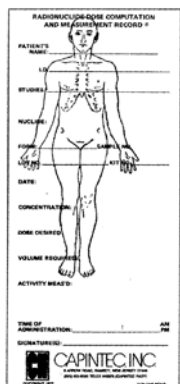


The **Epson Ticket Printer** is for use with the CRC-25 and CRC-55t families of Dose Calibrators, CRC-Beta Enhanced Counter and CAPRAC-T Well/Wipe Test Counters. It allows individual tickets to be positioned easily for printing. The printer automatically aligns the ticket and after printing feeds it out the back. Although designed for tickets, standard paper can be used and is printed along one side. **CE**

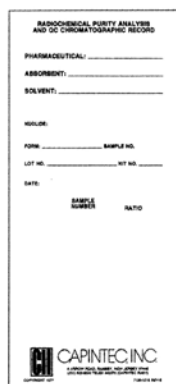
5430-0100 Epson Ticket Printer
2001-0058 Printer Ribbon



CRP-200



086-150 (CRP-500)



086-160 (CRP-600)



086-170 (CRP-700)

CRP-200

Duplicate Tickets with Peel-off, Self Stick Labels, 250/pk

086-150(CRP-500)

"Tickets with the Little Patient", 250/pk

086-160(CRP-600)

Radiochemical Purity Tickets, 100/pk

086-170(CRP-700)

Pre-Cal Record Tickets, 100/pk

Dose Calibrator / Well Counter Accessories



086-240 Vial/Syringe Dipper



34-210 Calicheck™
Linearity Kit



086-241 Well Insert



086-509 Lineator



086-242 Vial/Syringe Dipper
(for Atomlab only)

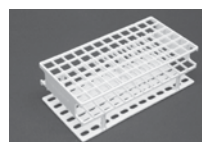


Test Tubes
12 x 75mm test tubes

0670-0016 Test Tubes, 250/pk



086-423 Moly Assay Shield
Vial, .3" lead
3.5" H x 2" dia



Uniwire Test Tube Rack
Holds up to 40 tubes

0670-0022 Test Tube Rack
specify tube size when ordering



Auxiliary Shield for Well Counter Chamber
for CAPRAC-T, CRC-25W and CRC55tW

Specs: 4" Dia x 9 3/4" H with Handle
0.5" thick lead walls and top
Weight: 22 lbs

5420-2072 Auxiliary Shield



CAPRAC Well Liner

5420-0121 Well Liner, 5/pk



Positron Shield
for Dose Calibrator Chamber
(for Capintec Dose Calibrators)

Specs: 2" thick lead split rings
12" outside diameter
19 3/4" overall height
575 lbs
2" x 4" cutout in bottom rings for cable
Includes a Stainless Steel Cover
(not shown)

PTI-PS Positron Shield



PET Auxiliary Shield
CAPRAC-T, CRC-25W and CRC-55tW

Specs: 8 3/4" x 6 3/4" x 16 5/8"
1" thick lead (shield fits snugly
around the well chamber for a total
of 2" of lead shielding.)
Weight: 91 lb

5420-PET Auxiliary Shield



Positron Stand

Specs: 3-Legged stand made of
arc-welded steel
Height ranges from 22 7/8" to 25 3/8"
We can customize the design to meet your
specifications

PS-STAND 3 Leg Adjustable

Supports a dose calibrator and positron shield!

If you are mounting under the countertop you will need to
make a 11.75" hole

Dose-Lift Dose Calibrator Syringe/Vial Transfer System



PTI-DL

- Dose-Lift is a pneumatic system designed to remotely lower and raise syringes or vials into and out of the dose calibrator ionization chamber.
- Because the system operates remotely the operator is not required to place their hand over the dose calibrator well when lowering and raising samples into and out of the well.
- This will greatly reduce radiation hand dose for the operator, supporting the facility's ALARA program.
- Because Dose-Lift is a pneumatic system, no electricity is required. The system is operated by either hand or foot control. The unit includes an air compressor.
- The travel range of the Dose-Lift will be adjusted to match the depth of your dose calibrator well.
- **Dose-Lift is easily mounted to the top of your existing dose calibrator well.**

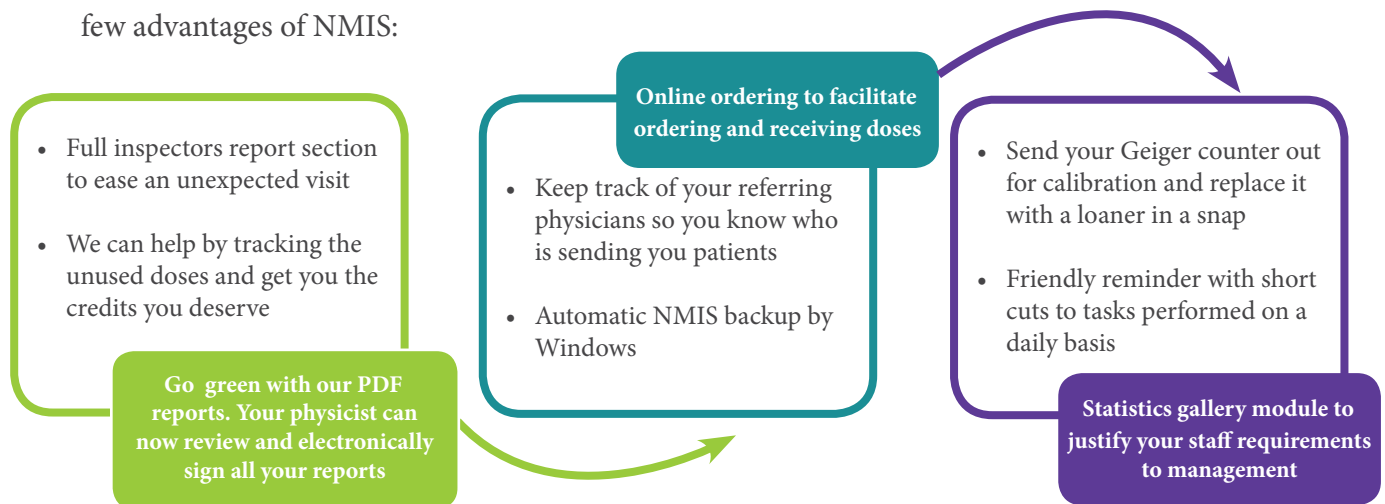
PTI-DL

Dose-Lift Dose Calibrator Syringe/Vial Transfer System
Includes: Lifting mechanism and air compressor.

Nuclear Medicine Information System

NMIS was created in 1985 as a way to manage basic record keeping for Nuclear Medicine departments. It has evolved into the industry standard for department management software by keeping pace with the changing needs of the Nuclear Medicine community. By listening to our customers and implementing their suggestions we have developed a comprehensive solution for all departments. From the largest medical center to the smallest imaging center, NMIS has what you need to navigate through the maze of federal and state regulations.

Any software package can maintain receiving, dosing and quality control records. What is different about NMIS are the steps we take to let you use this information in innovative ways. Here are just a few advantages of NMIS:



Additional Products

HL7 R.I.S./H.I.S NMIS Scheduling Interface

What is HL7?

The NMIS HL7 connector is a method that allows your R.I.S. or H.I.S System to send and receive information from your department. This connector saves time, helps accuracy and is efficient. In addition, it can send exposure information back to a central storage location.

DICOM Worklist Interface

What is DICOM?

The NMIS DICOM Worklist Interface allows you to pull patient information from your Worklist Server. This allows you to retrieve patient information from Worklist.

Offsite Secure Data Storage

What is Offsite Secure Data Storage?

The NMIS Offsite Secure Storage is a HIPPA compliant secure location that allows you to store digital records for disaster recovery.

Inkjet/Laser Paper for NMIS

Inkjet/LaserPaper is sold by the box, there are 1000 sheets per box.

You can print Draw Dose, Kit Preparation, Elution, Inventory and Schedule Records.
There are two small labels and one large label.


The print format for the Draw Dose large label and the printed slip below the label can be customized to only print the data you want. In addition, complete Organ Dosimetry can be printed on the form if desired.


LP-100	Label Paper with Radioactive Signs, 4 Quadrants with adhesive labels
LP-110	Label Paper without Radioactive Signs, 4 Quadrants with adhesive labels
LP-500	Pharmacy Label Paper with Radioactive signs, 4 Quadrants with adhesive labels
LP-500L/1	Pharmacy Label Paper with Radioactive signs, 4 Quadrants with adhesive labels for use with Lexmark Printers

For Canadian Customers, Rayonnement Danger Radiation Symbol

LP-100-RDR	Label Paper with Radioactive Signs, 4 Quadrants with adhesive labels
LP-500-RDR	Pharmacy Label Paper with Radioactive signs, 4 Quadrants with adhesive labels
LP-500L/1-RDR	Pharmacy Label Paper with Radioactive signs, 4 Quadrants with adhesive labels for use with Lexmark Printers

Dymo Labels for NMIS


Tc99m HDP Lot# 323-42		
Cal: 98.00 mCi @ 14:00 on 05-19-00		
Vol: 5.00 ml Exp: 05-19-00 @ 20:00 6Hrs Post		
Inv#: 6538	Tech: CM	
Conc: 16.98 mCi/ml	Manuf: Mallinckrodt	
Caution: Fed (USA) law prohibits dispensing w/o Rx		

Tc-99m HDP		
Lot#	323242	
Cal:	98.00 mCi @ 14:00 on 05-19-00	
Vol:	5.00 ml Exp: 05-19-00 @ 20:00	
Inv#	6538 6 Hrs Post	
Current:	98.00 mCi @ 14:00 on 05-19-00	
Conc:	19.60 mCi/ml	Tech: CM
Manuf:	Mallinckrodt	
Caution: Fed (USA) law prohibits dispensing without a prescription		

1.10" x 3.5"	260 labels per roll
SLP-260	NMIS Labels
SLP-260S	NMIS Labels w/Radioactive Symbol (shown)
SLP-260S-RDR	NMIS Labels w/Radioactive Symbol for Canadian Customers

2.125" x 2.75"	320 labels per roll
SLP-320	NMIS Labels
SLP-320S	NMIS Labels w/Radioactive Symbol
SLP-320S-RDR	NMIS Labels w/Radioactive Symbol for Canadian Customers (shown)

My Pharmacy- Hospital	
Nuclear Medicine	Dept Phone: 201 201 5678
Somewhere, New Jersey	
Patient Name: Test	
Procedure: Test Exam 1	
Radiopharmaceutical: Tc99m Cardiolite	
Admin. Activity: 1.000 mCi	
T 1/2: 6.02 Hrs	24 hr phone: 201 201 1234
Suggested time of detection: 3 Days	
This patient had a Nuclear Medicine Procedure and may still have small amounts of radiation capable of being detected by radiation monitoring equipment. The amount of radiation poses no danger to the public and is allowed by NRC Medical use regulations	

Tc99m TC KIT TEST		
Manuf: Pinestar Pharmacy Tech: JS		

Lot#: 96325	Inv#131389	
Tc Vial Lot# 16565	Sal Vol: 2.0ml	
Conc: 50.27 mCi/ml	Total Vol: 2.167ml	
Cal: 110.00mCi@12-28-05	12:58	
Exp: 12-29-05@ 00:58	12 Hrs Post	
Current Act: 108.94 mCi @ 13:03 on 12-28-05		

2" x 3.5"	300 non-adhesive labels per roll
SLP-300	Patient Exposure Card

2.125" X 2.75"	320 labels per roll
SLP-320RX	NMIS Labels w/Radioactive Symbol
SLP-320RX-RDR	NMIS Labels w/ Radioactive Symbol for Canadian Customers (shown)

Atomlab™ 960 Thyroid Uptake System



- Unique Positioning LED for accurate thyroid centering- A first in Thyroid Uptake System design
- Distance measurement rod with incremental markings (detector-to-patient)
- All-in-one flat panel PC with solid state hard drive running Windows Embedded Standard 7
- Count rate: 150,000 cps
- Extremely intuitive menus follow conventionally established nuclear medicine procedures
- Innovative multi-axis and height adjustable arm for easy patient positioning of seated or supine patients
- Calibration/Constancy fixture for simple and automated calibration
- Convenient storage positions for Neck Phantom and Calibration/Constancy Fixture
- 1024-channel multi-channel analyzer
- Software programs for Thyroid Uptake, Wipe Test, Quality Assurance, Manual MCA and Bioassay
- Smart cable management
- Optional: DICOM Compliant

**Web Training
available at NO charge
call for details**

SPECIFICATIONS:

MEDICAL SPECTROMETER HARDWARE:

Computer: Flat Panel PC, Windows® embedded standard 7, 1.66 GHz Atom Processor, 1 GB RAM, 32 GB SSD 15.6" Color Touch-Screen Monitor, HP Printer, Wifi, Ethernet & Speakers

Multi-Channel Analyzer: Channels: 1024

Spectral Resolution: FWHM 8%

Count Rate: (Maximum) 150,000 cps for Tc-99m

Count Rate Stability: 99%

Gross Count Rate Linearity: Within 5% up to 150,000 cps

Pulse Height Linearity: With 2% (independent of detector)

Detector High Voltage Adjustment: Automatic H.V.

adjustment for both probe and well; uses 10 µCi Cs-137 as the calibration source

Power: Low voltage transformer with hospital grade power cord & plug

Line Voltage: 120 VAC, 60 Hz, 2 AMP circuit breaker

230VAC, 50 Hz, 1 AMP circuit breaker

MEDICAL SPECTROMETER SOFTWARE:

Radionuclides: *Factory Programmed:* Au-198, Ba-133, Ba-133(well), Co-57, Co-57(w), Co-58(w), Co-60, Cr-51, Cs-137, Fe-59, F-18, Ga-67, Hg-197, I-123, I-125, I-131, In-111, Ir-192, K-42, Na-24, Pd-103, Se-75, Sr-85, Tc-99m, Tc-99m(w), Tc-99m/Tl-201, Tl-201, Yb-169, wide window
User Set: Unlimited user defined isotopes, setting ROI, half life, name, efficiency and range

OTHER HARDWARE:

Probe: 2" x 2" NaI (Tl) integral line scintillation detector

Uptake Stand:

Dimensions:

Arm down and retracted: 34" L x 26" W x 55" H

Maximum Height: 60"

Maximum Length: Arm Extended: 61"

Collimated Shield: Flat field collimator meeting IAEA specs

Positioning: Distance bar and positioning light

Arm: Counterbalanced, two section arm, moves 24.5" vertically and extends 31" horizontally from stand's vertical column

Casters: 4" Total locking

Weight: 280 lb

Combined weight with Well Counter: 330 lb

Low voltage transformer with hospital grade power cord

and plug

Power:

Line Voltage: 120 VAC, 60 Hz, 2 AMP circuit breaker

230 VAC, 50 Hz, 1 AMP circuit breaker

Warranty:

Two-year - US Only

Optional Well Counter (187-602):

Detector: 2" x 2" NaI(Tl) integral line scintillation detector with a .75" diameter x 1.44" deep well

Lead Shielding: 1" thick

Cover: .125" thick

Weight: 50 lb

Optional Lead Shield for Well Counter (187-603):

Lead Shielding: 1" thick

Weight: 69 lb

Certification: ETL Listed to UL 60601-1 Std. and CAN/CSA C22.2 No. 601.1-M90, 2nd and 3rd editions, and CE marked



187-600

Atomlab 960 Thyroid Uptake System, 120 VAC, Mobile, PC
Includes: All-in-one flat panel PC with solid state hard drive running Windows embedded standard 7, Atomlab 960 PC software, printer and 1024 channel multi-channel analyzer
2" x 2" tube assembly and base
Mobile support stand with collimator

Optional Accessories:

187-602

Well Counter, 1" lead (includes cover and calibration fixture)

187-603

Lead Shield for Well Counter, 1" lead

006-350

Wipe Test Kits, 1.75" dia, 500/pkg

043-365

Thyroid Uptake Neck Phantom

063-139

Cs-137 0.1 µCi Rod Source, Calibrated

101-103

Cs-137 10 µCi Check Source, Uncalibrated 1" dia x .25" thick.

187-146

Atomlab 960 DICOM Software

Captus® 4000e Thyroid Uptake System

New Features

- New and improved color touch screen user interface
- 20 inch all-in-one touch screen flat panel computer
- *Optional* fully integrated DICOM interface for patient data QC and wipe tests
- Custom protocol capabilities
- Ergonomically designed mobile stand
- Articulating arm with wide range of motion
- Medical grade Corian® countertop with document storage shelf
- Secure neck phantom storage location
- Source holder for reproducible QC positioning



SPECIFICATIONS:

Computer

- 20" All In One Touch Screen Flat Panel Computer

Multichannel Analyzer Interface PC Board

- Two detector input
- 1024 Channels
- Maximum count rate: 200,000 cps at 5%
- Count Rate Linearity-Within 2% up to 150,000 cps
- ROI's automatic or manual
- Differential Linearity <2% over the top 98% of channels
- Integral Linearity <1% over the top 98% of channels
- Presets live time, real time, total counts
- Automatic peak finding
- Software controlled lower level discriminator

Diagnostics and Tests:

- Fully automated Quality Assurance Section includes energy calibration, zero adjust, gain adjust, detector efficiency, detector resolution, chi-square, constancy and MDA
- Manual calibration available in MCA module

Printer

- Color Ink Jet printer

Thyroid Uptake Stand

- Adjustable height PC stand, left or right side mounting articulating arm with 34" vertical range of travel
- Protective cable management system
- Fully protected internally routed cables
- (4) Heavy duty locking casters that swivel 360°
- Isolation transformer for patient and user safety

Thyroid Uptake Stand Dimensions

- Closed Storage Position: 56" Height x 25" Width x 32" Depth
- Arm able to extend 36" horizontally beyond shelf
- Vertical travel 25" to 63"
- Weight: 340 lbs
- Weight with optional 1" Shielded Well: 410 lbs
- Weight with optional 2" Shielded Well: 540 lbs

Includes: .5 µCi Cs137 and .5 µCi Eu-152 Rod Sources

Two Year Warranty - US Only



5430-30151 Captus 4000e Thyroid Uptake System

Includes: Fully functional 1024 MCA which includes timed activity

20" all-in-one touch screen computer

Ink jet printer

Improved graphical touch screen user interface

Ergonomically designed stand

Fully articulating collimator arm for easy positioning

Medical grade Corian® countertop with convenient shelf for document storage

Cs-137 and Eu-152 rod sources and rod source holder

5420-30152 Captus 4000e, with 1" Lead Well Detector

5430-30154 Captus 4000e, with 2" Lead Well Detector

Optional Accessories:

006-350 Wipe Test Kits, 1.75" dia, 500/pkg

043-365 Thyroid Uptake Neck Phantom

5420-0087 Test Tubes for Wipe Samples, 100/pk

5430-00007 Cap-DICOM Software

Call Pinestar toll-free 1-800-682-2226, to place an order

NUCLEAR MEDICINE HOT LAB PACKAGE



Pinestar Technology Inc. offers a comprehensive Nuclear Medicine Hot Lab Package. The list below is of the standard items you will need to set up your **NEW** Department.

Dose Calibrator
3cc Syringe Shield
5cc Syringe Shield
Sharps Container Shield
Red Sharps Containers
L-Block
Syringe Carrier
Forceps
Lead Lined Waste Container
Lead Bricks
Flood Source

Minor Emergency Spill Kit
Co-57 Reference/Vial Source
Cs-137 Reference/Vial Source
Cs-137 Rod Source .5 μ Ci
Contoured Leg Rest
Cardboard & Plastic Signs
Radiacwash/Bind-It Decontaminant
Ludlum 14C Survey Meter
Pancake or End Window Probe
Check Source
Check Source Holder

PET Hot Lab Package, see page 78

LLMOD-NUC For Nuclear Medicine Stainless Steel 1/4" Lead-Lined Cabinet With 1/2" Lead-Lined Cave

2 mm Lead Glass
12" X 16"

1/2" lead shielding
in front of L Block

L Block with a "C"
shaped bite cut out

1/4" lead-lined
Bucket for Dose
Calibrator Chamber
inside of cabinet

Shown below: Bite
Cutout in back of
L Block with
recessed 1/4" Dose
Calibrator Bucket
and Lid



Dose Calibrator
Readout Unit Shelf

1/4" lead-lined
Sharp Container



**Includes 1/2" lead-lined
Cave**

Dose Calibrator Not Included

Dimensions: 43 1/2" W x 28 1/2" D 36" H (table surface)

Overall Height: 57"

Dimensions include handles

Specifications:

- 4 casters, 2 doors, Key-locked
- 2 holes cutout on the cabinet
 - 1 for dose calibrator chamber
 - 1 for lead lined sharps container
- Dose Calibrator Readout Unit Shelf
- Weight 1200 lbs
- 1/4" Lead Lined Bucket for Dose Calibrator Chamber
- 1/4" Lead Built-in Sharps Container
- L Block for Nuclear Medicine with Bite Cut-out
 - 1/2" lead shielding in front
 - Viewing panel 2 mm lead glass
- 1/2" Lead Lined Cave

LLMOD-NUC

LLMOD-NUC-WC

Lead-Lined Cabinet-Shielded Dose Calibrator Chamber & Sharp ShieldCall For Pricing

Above Cabinet with Optional Shielding for Well Counter ChamberCall for Pricing

(Dimensions 48 1/2" W x 28 1/2" D x 36" H (table surface))

Optional:

PTI-DL

Dose-Lift Dose Calibrator Syringe/Vial Transfer System

Includes: Lifting mechanism and air compressor. *See Page 13*

Call Pinestar toll-free 1-800-682-2226, to place an order

Bullet Syringe Shields



- Simply insert syringe and twist, it locks in place
- Available with or without Lead Glass Window
- No Screws
- No Springs
- 2.0 mm tungsten

Without Lead Glass Window

SSB3	Bullet Syringe Shield, 3 cc without glass
SSB5	Bullet Syringe Shield, 5 cc without glass
SSB10	Bullet Syringe Shield, 10 cc without glass

With Lead Glass Window

SSB3-G	Bullet Syringe Shield, 3 cc
SSB5-G	Bullet Syringe Shield, 5 cc

Replacement Glass:

SSB-GLASS-1	Replacement Glass, 3 cc or 5 cc
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Shown with removable black protective rubber band

Latchkey Syringe Shields

- Covers the entire length of the syringe barrel
- Securely attaches with a twist into the latchkey end
- 2.0 mm tungsten
- No Screws, Pins or Springs
- For BD Syringes only

Without Lead Glass Window

NMC-237-E	Latchkey Syringe Shield, 3 cc without glass
NMC-238-E	Latchkey Syringe Shield, 5 cc without glass

With Lead Glass Window

NMC-237G-12	Latchkey Syringe Shield, 3 cc
NMC-238G-E	Latchkey Syringe Shield, 5 cc

237GLASS	Replacement glass for 3 cc
LKG-E	Replacement Glass - fits newer style 3 cc and 5 cc .



BETA Syringe Shield

Suitable for Ra-223 and ideal for Zevalin Y-90

- Lead and plastic shielding, designed for Beta
- Suitable for Ra-223 Xofigo® and ideal for Zevalin Y-90
- 007-956 Barrel is constructed of .422" plastic, .062" lead, .125" plastic
- 007-957 Barrel is constructed of .25" plastic, .062" lead, .125" plastic
- Easily sanitized with alcohol wipes



See Page 45
For additional Beta Products

007-956	Beta Syringe Shield, 1 cc
007-957	Beta Syringe Shield, 10 cc

Pro-Tec® II Syringe Shields

- Barrel of the shield is constructed of 2 mm thick tungsten that will reduce radiation exposure from Tc-99m by more than 99% attenuation for Tc-99 tested with TLD chips
- A 5.05 density lead glass window
- Thumbscrew holds syringes firmly in place
- **New Design** means screws will not strip as easily (screws into black housing) and glass is easier to replace
- Available with or without lead glass window
- Easily sanitized with alcohol wipes



With Lead Glass Window

007-800	Pro-Tec II Syringe Shield, 3 cc with glass
007-900	Pro-Tec II Syringe Shield, 5 cc with glass

Without Lead Glass Window

PTI-800	Syringe Shield, 3 cc without glass
PTI-900	Syringe Shield, 5 cc without glass

Replacement Glass for New Design:

127-735	Fits 3 cc and 5 cc Pro-Tec II
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Replacement Glass for Old Design:

127-700	Fits 1 cc Pro-Tec II
127-789	Fits 3 cc and 5 cc Pro-Tec II
127-999	Fits 10 cc and 12 cc Pro-Tec II

Pro-Tec® III Syringe Shields

- Barrel of the shield is constructed of 2 mm thick tungsten that will reduce radiation exposure from Tc-99m by more than 99% attenuation for Tc-99 tested with TLD chips
- A 5.05 density lead glass window
- Safe-T-Lock design grips and secures the syringe upon insertion and releases at the press of a button
- Easily sanitized with alcohol wipes



007-734	Pro-Tec III Syringe Shield, 1 cc
007-755	Pro-Tec III Syringe Shield, 2.5 cc
007-735	Pro-Tec III Syringe Shield, 3 cc
007-736	Pro-Tec III Syringe Shield, 5 cc
007-738	Pro-Tec III Syringe Shield, 10 cc

Replacement Glass:

127-734	Fits 1 cc Pro-Tec III
127-735	Fits 3 cc and 5 cc Pro-Tec III
127-738	Fits 10 cc Pro-Tec III

Suitable for HSW brand of syringes

007-755	Pro-Tec III Syringe Shield, 2.5 cc
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Color Coded Syringe Labels on page 136

Pro-Tec® IV Syringe Shields



- High density (5.6) lead glass shielding significantly reduces radiation exposure from Tc-99m by more than 99% attenuation for Tc-99 tested with TLD chips
- 360° barrel view
- Safe-T-Lock design grips and secures the syringe upon insertion and releases at the press of a button
- End of the lead glass barrel is tapered so that the contents can be viewed
- Easily sanitized with alcohol wipes

Suitable for Quadramet
Reduces exposure from Samarium 153 by 99%

007-670	Pro-Tec IV Syringe Shield, 1 cc
007-675	Pro-Tec IV Syringe Shield, 3 cc
007-680	Pro-Tec IV Syringe Shield, 5 cc
007-685	Pro-Tec IV Syringe Shield, 10 cc

TommyBoy™ Syringe Shields



Quick-Turn Syringe
Locking Mechanism



- Non-toxic, high density yet lightweight, composite radiation shielding material
- Ergonomic contoured grip
- Leaded acrylic viewing window
- Secure Quick-turn syringe locking mechanism
- Lightweight
- No screws, or springs
- Weight: approximately 1.6 oz

PTI-03-1	TommyBoy3 Syringe Shield, 3 cc Blue
PTI-05	TommyBoy5 Syringe Shield, 5 cc Red

easySQUEEZE® Syringe Shields



- Can be fully disassembled
- Insertion by hand, Extraction via gravity
- 100% recyclable
- Maximum visibility
- Dose reduction > 99% at 140 KeV
- Includes: High Density beveled glass, tungsten protection, resin shield



PTI-SQ3	easySqueeze Syringe Shield (yellow), 3 cc
PTI-SQ5	easySqueeze Syringe Shield (pink), 5 cc
SQ3-Glass	Replacement Glass fits 3cc and 5cc easySqueeze



Color Coded Syringe Labels on page 136

Dose Drawing Syringe Shields

For drawing a dose from a shielded vial

- Optically clear high density (5.6) lead glass barrel
- Has 360° visibility and reduces radiation exposure from Tc-99m by more than 99%
- .125" lead flange at the end of the barrel provides additional hand shielding between vial shield and syringe shield
- Accommodates luer and non-luer lock syringes



Dose Drawing Syringe Shields:

007-661	Syringe Shield, 3 cc
007-663	Syringe Shield, 5 cc and 6 cc
007-665	Syringe Shield, 10 cc and 12 cc

Dose Drawing Syringe Shields with Replaceable Glass:

007-691	Syringe Shield, 3 cc
007-693	Syringe Shield, 5 cc and 6 cc
007-695	Syringe Shield, 10 cc and 12 cc

Replacement Glass

127-691	Fits 007-691, 3 cc
127-693	Fits 007-693, 5 cc and 6 cc
127-695	Fits 007-695, 10 cc and 12 cc



High Density Lead Glass Syringe Shields

- Optically clear high density (5.6) lead glass barrel
- Has 360° visibility and reduces hand exposure from Tc-99m by more than 99%
- End of the barrel is tipped with steel to protect it from breaking/scratching
- Accommodates luer and non-luer lock syringes
- Quick and smooth syringe insertion with an O-ring seal and anti-roll cap



007-620	Syringe Shield, 1 cc
007-635	Syringe Shield, 3 cc
007-652	Syringe Shield, 5 cc and 6 cc
007-612	Syringe Shield, 10 cc and 12 cc

***We Offer A Variety Of PET Syringe Shields
See page 24 & 25***

***PET / MRI Syringe Shields
See Page 72***

Call Pinestar toll-free 1-800-682-2226, to place an order

PET Bullet Syringe Shields

- Simply insert syringe and twist, it locks in place
- Available with or without High Density Lead Glass Window
- No Screws
- No Springs
- 9.0 mm tungsten
- Small anti-roll nodules keep them from rolling off the countertop



BUPET3
BUPET5

Without Lead Glass Window

PET Bullet Syringe Shield, 3 cc without glass
PET Bullet Syringe Shield, 5 cc without glass



BUPET3-G
BUPET5-G

With Lead High Density Lead Glass Window

PET Bullet Syringe Shield, 3 cc
PET Bullet Syringe Shield, 5 cc

Replacement Glass:

SSB-GLASS-1 Replacement Glass, 3 cc or 5cc

Pro-Tec® PET Syringe Shields

- Constructed of .34" thick (9 mm) tungsten, attenuates FDG F-18 by 88%
- Available with or without a high density (5.6) flush mounted lead glass window
- Fits most disposable syringes
- A thumbscrew holds the syringes firmly in place
- Easily sanitized with alcohol wipes



007-973
007-975
007-980

With Lead Glass Window

Pro-Tec PET Syringe Shield, 3 cc
Pro-Tec PET Syringe Shield, 5 cc
Pro-Tec PET Syringe Shield, 10 cc

Replacement Glass

007-974 Pro-Tec PET Replacement Glass



PTI-973
PTI-975
PTI-980

Without Lead Glass Window

Syringe Shield, 3 cc without glass
Syringe Shield, 5 cc without glass
Syringe Shield, 10 cc without glass

Gaard Lock™ PET Syringe Shields

- Unique flange locking design reduces exposure with faster handling
- Constructed of .34" thick (9 mm) tungsten, attenuates FDG F-18 by 88%
- Available with or without a high density (5.6) flush mounted lead glass window
- Twist to lock syringe in place with one hand
- Easily sanitized with alcohol wipes

With Lead Glass Window

- 007-716 Gaard Lock PET Syringe Shield, 3 cc
 007-717 Gaard Lock PET Syringe Shield, 5 cc
 007-718 Gaard Lock PET Syringe Shield, 10 cc

Replacement Glass:

- 007-974 Gaard Lock PET Replacement Glass

Without Lead Glass Window

- PTI-711 Syringe Shield, 3 cc without glass
 PTI-712 Syringe Shield, 5 cc without glass
 PTI-713 Syringe Shield, 10 cc without glass



Z-PET Syringe Shield

- Constructed of .55 thick (14 mm) tungsten, attenuates FDG F-18 by 97%
- Accommodates standard 5 cc syringes
- 2.75" L x 1.7" dia
- Weight: 3.7 lb
- Easily sanitized with alcohol wipes

- 007-945 Z-PET Syringe Shield, 5 cc



***We Offer A Variety Of PET / MRI Syringe Shields
 See our MRI Products
 Page 72-73***



Color Coded Syringe Labels on page 136

Veinlite LED **Plus**



The Veinlite LED helps locate the vein, and then secures it in place by stretching the skin for easy needle insertion.

The Veinlite LED **Plus** offers 65% improved visualization and is 100% brighter than the original Veinlite LED. There are 28 diodes in two LED colors for vein imaging: 22 orange for superficial veins, 6 red for deeper veins or dark-skinned patients.

Dimensions: 3.75" L x 2" W x 1" Thick

Power: Rechargeable lithium-ion battery



007-275-P

Veinlite LED Plus

Includes: 50 disposable plastic covers

007-276

Replacement disposable plastic covers, 50/pkg

NeRD Needle Recapper



This innovative needle recapping device facilitates OSHA compliant one-handed Needle recapping

- Suction cup base provides stable positioning
- Accepts most needle brands, sizes and gauges
- Small size makes it easily transportable- won't clutter the work area
- Made of solid rubber in a highly visible color
- Easily cleaned and decontaminated

Dimensions: 1.5" W x 1.5" L x 1.25" H

NMC-600

NeRd Needle Recapper

Syringe Recapper



Don't put yourself at risk with an accidental needle stick! The Syringe Recapper is a safe and inexpensive way to protect yourself when recapping a used syringe. Used either hand-held or placed on a flat surface, such as a procedure tray, the Recapper is made of lightweight plastic that is easily carried anywhere.

Dimensions: 3.25" L x 2.75" W

008-300

Syringe Recapper

Shielded Syringe Holder

Accommodates shielded and unshielded syringes

- Constructed of lead shielding, encased in steel
- Shielding tapers from .25" to .5" lead
- Large diameter base ensures stability
- Dimensions: 6.5" H, I.D: .84" Dia x 5.6" H, Weight: 6 lb
- Accommodates Pro-Tec II (1cc, 3cc, 5cc),
Pro-Tec III (1cc, 3cc, 5cc),
Pro-Tec IV (1cc)

009-205 Shielded Syringe Holder



Syringe Shield Holder

Don't let your syringe shields roll around on the counter!

- Protects your syringe shields from scratches or misplacement while freeing up extra work space
- Will support up to eight shields and is counterbalanced to prevent tipping
- Dimensions: 7.5" W x 4" D x 6" H
- Weight: 5 lb

007-999 Syringe Shield Holder

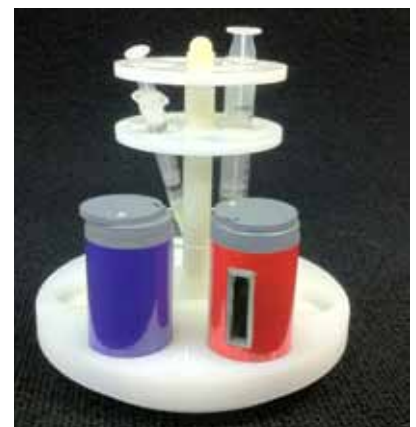


Vial & Syringe Shield Holder

Facilitates fast, easy preparation and handling of your radiopharmaceuticals

- Convenient rotating base accepts 6 color coded vials, features a unique clear view integral needle guard
- Stationary syringe shield support accepts 4 syringe shields
- Dimensions: Base Diameter: 7.5"
Overall Height: 7.5"
Total Weight: 1.6 lb

NMC-101 Vial & Syringe Shield Holder



Lead-Lined Syringe Carriers

Two sizes, each offered in .125" and .25" lead shielding for added protection

Specifications:

001-179	I.D. 8.25" L x 3" W x 2.9" H O.D. 9.5" L x 4.4" W x 3.5" H Lead Shielding: Sides, top, bottom .125" thick, Ends: .25" thick
001-180	I.D. 7.7" L x 2.6" W x 2.7" H O.D. 9.5" L x 4.4" W x 3.5" H Lead Shielding: Sides, top, bottom .25" thick, Ends: .5" thick
001-181	I.D. 8" L x 1.9" W x 1.97" H O.D. 9.25" L x 3.4" W x 2.6" H Lead Shielding: Sides, top, bottom .125" thick, Ends: .25" thick
001-182	I.D. 7.5" L x 1.7" W x 1.7" H O.D. 9.25" L x 3.4" W x 2.6" H Lead Shielding: Sides, top, bottom .25" thick, Ends: .5" thick

Shielded Syringe Carrier, .125" Lead

001-181	Syringe Carrier, Small, Weight 7.5 lb
001-179	Syringe Carrier, Large, Weight 11.3 lb

Shielded Syringe Carrier, .25" Lead ****IDEAL FOR PET****

001-182	Syringe Carrier, Small, Weight 11 lb
001-180	Syringe Carrier, Large, Weight 17 lb

Euro-Lock Deluxe Syringe Carrier



- Constructed of stainless steel inside and out, with ALL enclosed lead-not painted
- The lead walls are poured between the stainless steel so there is no exposed lead
- It will store and transport syringes, vials or ampoules up to 9" long
- The lid is overlapping with a latch to prevent streaming and opens 180°
- 4 rubber feet are attached to the bottom of the carrier

Dimensions: I.D. 9" L x 2" W x 2" H O.D. 10.15" L x 3.2" W x 6.5" H
Lead Shielding: .125" thick

NMC-220 Euro-lock Deluxe Syringe Carrier

Lead-Lined Storage Container

- Useful for storing used syringes, alcohol wipes etc., that may be contaminated with low-energy gamma or beta radiation residue prior to disposal

DJ-202 Specifications:

- Constructed of stainless steel lined with .125" lead
- Dimensions: 7" H x 6" Dia
- Lead Shielding: .125" thick
- Weight: 9 lb
- **Plastic Insert: PC-201**

DJ-202	Lead-Lined Storage Container
PC-201	Plastic Insert for DJ-202, 12/bx



New Lead Vial Shield With Magnetic Top With or Without Glass Window

Color Coding - A Visual Indicator To Avoid Mix Up



- **Magnetic top** designed to facilitate minimal handling
- **Bottom is *not* removable**
- **Accommodates most 10ml vials**
- **.31" lead shielding**
- Available with or without lead glass
- 4.2 lead density lead glass window
- Weight: 2.2 lb
- Outer Dimensions: 1.70" Diameter x 3.0" H

Without Glass

053-610-NG	Glucoscan (red)
053-611-NG	Osteolite (purple)
053-612-NG	Pulmolite (lt orange)
053-613-NG	Pyrolite (blue)
053-614-NG	Hepatolite (brown)
053-615-NG	Microlite (yellow)

For MAA, DTPA and MDP

DTPA-1-NG	Green
MDP-1-NG	Silver
MAA-1-NG	Cyan

With Glass Window

053-711-WG	Glucoscan (red)
053-712-WG	Osteolite (purple)
053-713-WG	Pulmolite (lt orange)
053-714-WG	Pyrolite (blue)
053-715-WG	Hepatolite (brown)
053-716-WG	Microlite (yellow)

For MAA, DTPA and MDP

DTPA-1G-WG	Green
MDP-1G-WG	Silver
MAA-1G-WG	Cyan

High Density Lead Glass Vial Shield

- High density (5.6) lead glass provides clear 360° visibility
- Automatic centering action positions vials within the shield and holds them securely for extra safety and convenience
- Suitable for low-energy radioisotopes
- Removable cap makes cleaning and needle insertion simple
- Lead equivalency: 0.12"
- HVL for 99m-Tc: 10
- Accommodates Vial Sizes: 5 thru 30 ml
- Weight: 3 lb



**See page 144 for
Forceps and Niptong
Information**



001-075 Vial Shield, .12" lead equiv

Call Pinestar toll-free 1-800-682-2226, to place an order

Hamilton Vial Heating Shield



Dimensions:

Tungsten thickness: Wall/Bottom 4.25 mm, Top 3.3 mm

Inner Dia: 26.5 mm

Inner Height: 5.57 mm

Weight: 1.05 lb

T251

Hamilton Vial Heating Shield



Tungsten Magnetic 10ml Vial Shield

This Tungsten Vial Shield is designed to hold a 10 ml vial

- Convenient **Magnetic Cap** is easy to remove and replace
- Tungsten thickness of 6 mm



Dimensions:

Tungsten thickness: 6 mm

Inner Size: 26.5 mm x 56.5 mm

Outer Size: 38.5 mm x 70 mm

Weight: 2.1 lb

Magnetic Cap Dimensions: 39 x 7 mm

Weight : .26 lb

T208

Tungsten Magnetic Vial Shield, 10 ml



Magnetic Cap



Tungsten Magnetic Vial Shield for Technelite® Eluate Vial

For use with the Technelite® generator, this solid tungsten vial shield is designed to shield multi-curie elutions. The tungsten will retain its shape under the roughest handling and is virtually unbreakable. Features include a removeable bottom and magnetic cap which stays in place even when inverted. Will hold a Technelite® Eluate Vial.



Tungsten Thickness: 7 mm

Inner Size: 35.5 x 71 mm; Outer Size 49.5 x 91.5 mm

Weight: 4 lb

Magnetic Cap Dimensions: Size 38 x 8 mm

Weight: .25 lb

Removeable Bottom Dimensions:

Inner Size 32.3 x 6.5 mm; Outer Size 54 x 15 mm

Weight: .72 lb

T-206

Tungsten Magnetic Vial Shield
for Technelite® Eluate Vial

Magnetic Cap



Removeable Bottom



Tungsten Vial Shield

- Designed to greatly reduce exposure to vials containing liquid radioisotopes
- Constructed of .19" thick tungsten, equivalent to .38" lead at 150 keV
- A loss-proof **slide injection port** on the top allows easy access to vial septum
- Dimensions: 1.44" Dia x 2.8" H, I.D.: 1" x 2.25"
- Lead equivalency: .38"
- Weight: 1.65 lb

053-805-T Tungsten Vial Shield



Tungsten Magnetic 30 ml Vial Shield



This Tungsten Vial Shield **will hold a 30 ml Myoview Vial** (not included)

- Convenient **Magnetic Cap**- easy to remove and replace
- Tungsten thickness of 6.6 mm
- Adapter available if using 10 ml

Total Height: 3.5"
Tungsten Thickness: 6.6 mm
Inside Diameter: 30 mm
Weight: 3.1 lb

Magnetic Cap



*Need a different thickness?
Can be custom made to your specifications.*

T205 Tungsten Vial Shield, 30 ml

1" Lead Vial Shield - 50ml

This vial shield is designed to **hold a 50 ml vial**

- Constructed of 1" lead
- Distinct color acts as a visual indicator

Total Height: 6.3"
Lead Thickness: 1"
Outer Diameter: 3.8"
Inside Diameter: 1.8"
Weight: 25 lbs



PTI-50-P 1" Lead Vial Shield, 50 ml, Pink

Shielded ^{99m}Tc Activating System



The Shielded ^{99m}Tc Activating System performs the heating steps required in the preparation of ^{99m}Tc labeled radiopharmaceuticals such as:

- ^{99m}Tc Sulfur Colloid
- ^{99m}Tc Mertiatide (MAG3)
- ^{99m}Tc Sestamibi (Cardiolite or Miraluma)
- ^{99m}Tc Apcitide (AcuTect)
- ^{99m}Tc Depreotide (NeoTect)



The System consists of a boiling pot heat source and a container that is lined with .25" lead (other thicknesses available). The container has four slots to accommodate forceps.

Weight: Approx. 70 lb

Outside Dimensions: 12" Dia x 10 5/8" H

SAS **Shielded ^{99m}Tc Activating System, 110 V**

Vial Shield

For heated preparation of Sulphur Colloid, MAG-3, Cardiolite, AcuTect & NeoTect

Vents are located to minimize scatter leakage, boiling water can circulate freely around the vial, heating the solution rapidly and uniformly

- 5.6 density flush mounted lead glass window
- Constructed of .25" thick lead
- Accommodates vial sizes: up to 1.5" Dia x 3.125" H
- Dimensions: 2" Dia x 3.875" H
- Weight (including handle): 3 lb

001-236 **Vial Shield, .25" lead**



Cast Iron Electric Hot Plate

- 7 1/8" diameter heavy-duty cast iron element
- Solid element surface delivers heat evenly to pot or pan
- Handles up to 12-quart pots
- Infinite heat control keeps food simmering or boiling
- Non-skid feet for stability and commercial-rated 3 prong

Product Details

Dimensions: 14" x 12" x 3", 7 pounds

Shipping Weight: 8.4 pounds

Power Requirements: 120 volts-1500 watts

PCR1

Cast Iron Electric Hot Plate



Big Digit Timer

- Simple to use timer
- Large LCD display
- Maximum countdown from 99 minutes and 59 seconds
- Loud alarm sounds for one full minute
- Alarm volume increases after 10 seconds
- Clip on case, flip-open stand
- Style varies

NMC-BDT

Big Digit Timer



Pro-Tec® Unit Dose Pig

PET Unit Dose Pig
See Page 89

- Accommodates the following syringes:
BD: 3 cc, 5 cc, 10 cc BD Safety Lock: 3cc
Monoject: 3 cc, 6 cc Monoject Safety: 3cc
- .25" lead shielding
- O-ring seal
- Dimensions: 8.5" H x 1.94" Dia
- Construction: Lead, fully encapsulated with polycarbonate on the outside and polypropylene on the inside
- Color: Red, White, Blue
- Overlapped lead eliminates streaming

001-280 Pro-Tec Unit Dose Pig, Red

001-281 Pro-Tec Unit Dose Pig, White

001-282 Pro-Tec Unit Dose Pig, Blue

Note: Unit Dose Pigs are sold in lots of six



Unit Dose Pigs also available for Zevalin Y-90 and In-111 call for information.

Pro-Tec® Pig Shipping Bag

- Durable, nylon, waterproof shipping bag designed to accommodate up to 11 Pro-Tec Pigs containing syringes
- Ensures safe, convenient handling of syringes from the pharmacy and back
- Meets DOT 7A Type A packaging requirements
- Dimensions: 10.5" H x 5.75" W x 11.5" D
- Material: Exterior: Nylon Interior: Polyester



001-754 Pro-Tec Pig Shipping Bag

001-756 Type I Placard, 100/pkg, 6.7" x 5.5"

001-757 Type II Placard, 100/pkg, 6.7" x 5.5"

001-758 Covers, hook & loop fasteners, plastic
Sm, 90 x 130 mm, 50/pkg

001-759 Covers, hook & loop fasteners, plastic
Md, 130 x 40 mm, 50/pkg

001-779 Covers, hook & loop fasteners, plastic
Lg, 160 x 180 mm, 50/pkg

PET Vial Pig

Vials containing PET or other high-energy radionuclides can be safely transported in this 10/30ml Vial Pig. The pig offers a minimum of 1" of lead shielding to accommodate the concentrated energy. The Vial Pig can be used independently or with the PET Shipping System 001-724 which meets DOT II Type A packaging requirements

- Dimensions: Exterior: 6.63" H x 4.15" Dia Interior: 2.76" H x 1.151" Dia
- Lead Shielding: Sides & Bottom: 1" thick Top: 1.75"
- Weight: 21.3 lb

001-706 PET Vial Pig, 10/30 ml, 1" lead

For: 30 ml vials

Includes: 001-707 Vial Pig Adapter,
to accommodate 10 ml vials and three Absorbent Sheets

001-771 Pig Absorbent Sheets, 100/pkg

Shipping Container for PET Vial Pig, see page 90



Call Pinestar toll-free 1-800-682-2226, to place an order



PTI-SSH

Universal Unit Dose Carrier

- Universal design facilitates convenient storage and the transport of up to 10 shielded syringes
- Integrated lift handles
- Constructed of durable ABS plastic
- Accepts 3-5-10 cc Unit Dose Pigs
- Specifications:
 - Color: White
 - Hole cutout size: 1.5" Dia
 - Size: 14.75" L x 5.75" W x 4.75" D
 - Weight: 3.1 lbs

Universal Unit Dose Carrier



001-284

PET Unit Dose Pig Rack

- Designed for countertop use
- Holds up to eight PET pigs
- Will accommodate PET, Zevalin Y-90, and Zevalin In-111 Pigs
- Bottom of the rack has hexagonal cutouts that match the bottom of the PET Pig
- Dimensions: 12" W X 1.75" H X 6" D
- Weight: 2.8 lb

PET Unit Dose Pig Rack

Polypropylene Unit Dose Pig Holder



- Polypropylene construction
- Holds up to 25 pigs up to 2" Dia
- Lightweight, only 6.5 lb
- Specifications: 15" W x 15" L x 3" H

*Need a different size?
Can be custom made to your specifications*

NMC-PHPP

Polypropylene Unit Dose Pig Holder

Unit Dose Wall Rack for GE Pigs

This Unit Dose Wall Rack is made specifically for GE Pigs.

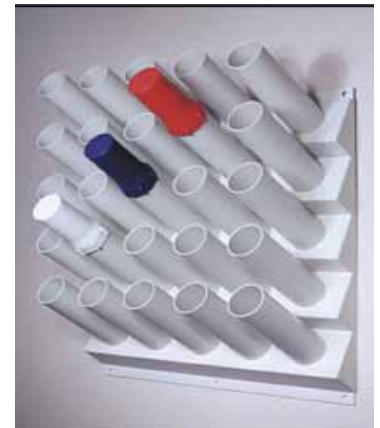
- Constructed of Stainless Steel
- Holds 27 pigs up to 2.5" Dia
- 6 mounting holes to securely attach to your wall
- 26" W x 17.5" D x 3.5" H
- Lightweight, only 22 lb



NMC-GEPIG Unit Dose Pig Wall Rack for GE Pigs

Unit Dose Pig Wall

- Holds up to 25 pigs up to 2.25" diameter
- Improves work space with its pigeonhole design and reduces unnecessary handling
- Specifications: 17" W x 18" H

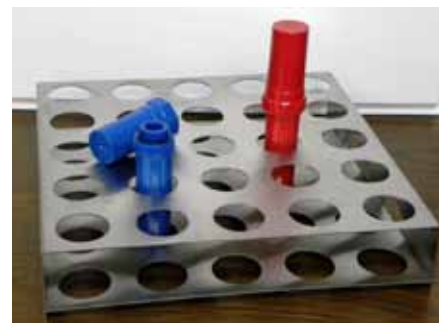


008-400 Unit Dose Pig Wall Rack

Stainless Steel Unit Dose Pig Holder

- Stainless Steel construction
- Holds up to 25 pigs up to 2" Dia
- Lightweight, only 6 lb
- Specifications: 15" W x 15 1/8" L x 3" H

*Need a different size?
Can be custom made to your specifications*



NMC-PHSS Stainless Steel Unit Dose Pig Holder

Phlebotomy Chairs



NMC-8572

Overall Height: 44.5"
Overall Width: 35"
Seat Height: 22.5"
Seat Width: 18.75"
Seat Depth: 18.5"
Adjustable Armrest: 28.25" - 34.25"
Color: Blueridge Vinyl
Weight Capacity: 300 lbs



**Includes Dual
Pivot Arms**

NMC-8573

Overall Height: 44.5"
Overall Width: 29"
Seat Height: 22.5"
Seat Width: 18.75"
Seat Depth: 18.5"
Dual Adjustable Armrests: 28.25" - 34.25"
Color: Blueridge Vinyl
Weight Capacity: 300 lbs



NMC-8574XL

Overall Height: 36.5"
Overall Width: 40.25"
Seat Height: 22.5"
Seat Width: 24.25"
Seat Depth: 18.5"
Adjustable Armrest: 28.25" - 34.25"
Color: Blueridge Vinyl
Weight Capacity: 450 lbs



**Includes Dual
Pivot Arms**

NMC-8575XL

Overall Height: 36.5"
Overall Width: 34"
Seat Height: 22.5"
Seat Width: 24.25"
Seat Depth: 18.5"
Dual Adjustable Armrests: 28.25" - 34.25"
Color: Blueridge Vinyl
Weight Capacity: 450 lbs

NMC-8572	Padded Phlebotomy Chair with Drawer
NMC-8573	Padded Phlebotomy Chair, no Drawer
NMC-8574XL	XL Padded Phlebotomy Chair with Drawer
NMC-8575XL	XL Padded Phlebotomy Chair, no Drawer

Injection / Resting Chairs and Recliners



Comfortable resting spot for patients to wait between injection and imaging.

- Three recline positions
- Infinitely adjustable back
- Quick release handle
- Trendelenburg positioning
- **Ideal for PET**

Specifications:

Dimensions: 36.25" W x 49" H (add 9.25" width for each side tray)
Seat Dims: 20" D x 25" W x 21" H
Back Dims: 25" W x 34" H (above seat)
Upholstery: Blueridge vinyl, fire retardant meets TB133
Frame: Welded powder-coated steel
Casters: Four 5" heavy-duty with positive locking swivel and wheel brakes
Weight: 116 lb
Weight capacity: 450 lb

214-210

Injection/ Resting Chair



Smaller footprint, ideal for those departments with limited space.

- Padded drop-down armrests
- Dual fold down side tables
- Trendelenburg positioning

Specifications:

Dimensions: 33.75" W x 49" H (add 9.25" to width for each side tray)
Seat Dims: 20" D x 21" W x 21" H
Back Dims: 21" W x 31.5" H (above seat)
Upholstery: Many color choices, fire retardant meets TB133
Frame: Welded powder-coated steel
Casters: Total-lock and directional-lock casters
Weight: 105 lb
Weight capacity: 275 lb

NMC-655

Injection /Resting Chair

Phlebotomy/ENT Chair



NMC-8612

- Sturdy Steel Frame
- 360° rotation with swivel lock
- 10° elevation from horizontal position
- Manual foot pedal height adj.
- Manually adjustable backrest
- Manually adjustable footrest
- Hinged arms
- Articulating headrest
- Shipping Weight: 230 lb

Specifications:

Length Fully Extended: 71"
 Min Seat Height: 23"
 Max Seat Height: 38"
 Overall Width: 31.5"
 Seat Width: 18"
 Arm length: 23"
 Many color choices available
Weight Capacity: 250 lb

NMC-8612

Phlebotomy/ENT Chair

Care Cliner



- **Dual side swing-arms for modified entry and ease of cleaning**
- Dual fold down tables
- 5" nylon total-lock casters
- Built-in headrest
- Headrest cover
- Trendelenberg release on back

Specifications:

Dimensions: 33.5" W x 48.5" H (add 9" to width for each side tray)
Seat Dims: 20" D x 21" W x 21" H
Back Dims: 21" W x 32.5" H (above seat)
Upholstery: Many color choices, fire retardant meets TB133
Frame: Welded powder-coated steel
Casters: Nylon total-lock and directional-lock casters
Weight: 104 lb
Weight capacity: 275 lb

NMC-694

Care Cliner

Model 3400 Graseby Nuclear Cardiology Syringe Pump



AC or battery operated
(Internal rechargeable battery)

Accurate: $\pm 2\%$

RS 232 Communications

Open communications protocol to allow
the pump to be remotely controlled and/
or monitored

Model 3400 Graseby Pump for Nuclear Cardiology

Only Demo/Used/ Refurbished Model's available

Model 3400 Infusion Sets:

MC6016T	60" Microbore non-deph extension set with male luer lock, T-connector with pinch clamp. Approx. priming volume 1.6ml, latex/freon free. 50 sets/case	\$149.00
MC6013	60" Microbore Non-deph extension set with male & female luer locks and pinch clamp. Approx. priming volume 1.2ml, latex/freon free. 50 sets/case	\$100.00
MC0603	6" Microbore non-deph extension set with rotating male luer lock, T-connector, pinch clamp. Approx. priming volume 0.3ml, latex/freon free. 50 sets/ case	\$120.00

Features:

- Wide infusion rate range: 0.1- 1200 ml/hr
- Multiple unit selection: ml/hr, ug/hr, mg/hr, ug/kg/hr, mg/kg/hr, ug/kg/mn, mg/kg/mn
- Syringe size flexibility: 5ml, 10ml, 20ml, 30ml, 50/60ml
- Simple operation: Menu driven display
- Cost effective: No dedicated disposables

Specifications:

AC Power Supply:	100-120V., 50/60Hz or 220-240V	
Battery Type:	Sealed Lead Acid (Cyclon)	
Battery Life:	10 hours (fully charged at 400ml/hr)	
Syringe Types:	BD Plastipak 5, 10, 20, 30, 50/60ml	Braun Omnifix 5, 10, 20, 30, 50/60ml
	Braun Perfusor 50ml (optional)	Monoject 5, 10, 20, 30/35, 50/60ml
	Terumo 5, 10, 20, 30/35, 50/60ml	Fresenius Injectomat 50ml
	IMS Pumpjet 30ml (prefilled)	
Flow Rate:	Maintenance infusion: 0.1- 400ml/hr, in 0.1 increments	
Bolus infusion:	0.1- 1200ml/hr, in 0.1ml increments	
Mass unit programming:	Units available: $\mu\text{g/kg/hr}$, $\mu\text{g/kg/min}$, mg/kg/hr , mg/kg/min , $\mu\text{g/kg}$, mg/kg ml/hr	
Volume Infused Totaliser:	0- 999.9ml	
Weight:	not exceeding 7.7 lb including batteries and pole clamp	
Dimensions:	12.8" x 7.7" x 4.5" with pole clamp fitted & plunger clamp closed	
Operating Temperature:	41° to 104° Fahrenheit	

Graseby Injection Pump Shield

**Stainless Steel
Exterior**



Designed to reduce exposure during the injection of radionuclides that require a very slow infusion protocol using Graseby Injection Pumps

- .5" Lead Shielding with Stainless Steel exterior
- Lead glass window (5.6 density) with clear visibility of syringe
- Window Dimensions: 4.25" W x .5" H x .38" Thick
- Overall Dimensions: 20.3" L x 11.4" W x 8"H
- Weight 90 lbs
- Attenuation: greater than 99% for Y-90, I-131, F-18

007-GIPS Injection Pump Shield

Note: Graseby Syringe Pump Sold Separately

Graseby Pump Cart with Injection Pump Shield

Reduce Radiation Exposure!!!

Completely Shielded

Easy to move right next to the patient

Technologists no longer have to carry the Injection Pump Shield

- Integrated L-Block
 - 12" W x 16" H
 - (2) pieces 12" x 8" x 5/16" Lead Glass
 - (2) pieces 12" x 8" x 1/4" Polycarbonate
- 1/2" Shielding on Stationary Box used to hold Syringe Pump
- Shielded mobile slide over fixed shield
- Pull-out Drawer located on side with push handle
- Heavy Duty Casters
- Dimensions: 20" W x 18" D x 39 3/8" H

GPC Graseby Pump Cart with Injection Pump Shield

Note: Graseby Syringe Pump is not included



Injection Stand

Convenient, adjustable and portable for safe injections; includes a Lead-Lined Multi-Syringe Holder for convenient radionuclide injections

- Clear plastic armrest rotates 180°
- Height Adjustable: 29" H to 44" H
- Stand Base: 17.5" x 17.5"
- Construction: Stable, chrome plated tubular steel
- Shipping Weight: 21 lbs



135-022

Injection Stand

Lead-Lined Dual Cabinet for Disposal of Radioactive Syringes and Needles



- Security lock on top and side
- Vertical disposal for smooth and natural disposal
- Steel clad lead-lined cabinet
- 20 1/2" H x 9 3/8" W x 5 1/4" D
- Easy removal of insert for disposal
- **Houses two containers for decay rotation**

88-N4C Lead-Lined Cabinet 1/8" lead, Wt 46 lb

88-14 Lead-Lined Cabinet 1/4" lead, Wt 77 lb

610R **Red Plastic Container**, 8 1/2" L x 4" D x 9" H



Qty 1-10

Qty 11-15

Qty 16-31

Qty 32

Lead-Lined Dual Cabinet



- Simple system allows for disposal of radioactive syringes and infectious waste
- Unique design allows for separation of Tc99m and Non-Tc99m products
- 1/8" lead lining
- Completely Shielded
- Dimensions: 25.5" W x 8.25" D x 14" H
- Weight: 110 lb

NMC-8702 Lead-Lined Dual Cabinet

NMC-8704 **Sharps Container** for NMC-8702, 24/case
Size: 8 qt , 9.5" H x 10" W x 7" D



High Energy Sharps Container Shield



- Simple, safe and convenient solution for disposal of used syringes that may be contaminated with **high-energy isotopes such as I-131**
- Constructed of steel lined with .5" lead
- Hinged top with sliding port and side handles for easy transport
- Accommodates both small and medium Monoject Sharps containers
- Dimensions: I.D.: 7" L x 11.38" W x 11.25" H O.D.: 9.19" L x 15.25" W x 13.31" H
- Lead Shielding: .5" thick
- Security: Key-locked
- Finish: Powder coat
- Weight: 160 lb

039-326 Sharps Container Shield, .5" lead

039-338 **Monoject Container**, 4 qt, 10/pkg

039-387 **Monoject Container**, 8 qt, 10/pkg

Sharps Container Shields

- A simple, safe and convenient way to dispose of used syringes that may contain low-energy gamma radiation residue
- Constructed of steel lined with .125" lead



039-325 Specifications:

Dimensions: 7.5" L x 11.75" W x 10" H
I.D. 7" L x 11.25" W x 9.5" H
Lead Shielding: .125" thick
Security: Key-locked
Finish: Powder coat
Weight: 48 lb

Sharps Containers: 039-338 & 039-387

039-335 Specifications:

Dimensions: 7.5" L x 12.5" W x 13" H
I.D. 6.875" L x 10.75" W x 12.5" H
Lead Shielding: .125" thick
Security: Key-locked
Finish: Powder coat
Weight: 53 lb

Sharps Containers: NMC-182



039-350 Dual Shield Specifications:

Dimensions: 7.375" L x 12" W x 16.75" H
I.D. 7" L x 11.5" W x 14.875" H
Lead Shielding: .125" thick
Finish: Powder coat
Weight: 60 lb

Sharps Containers: uses two 039-338's

039-325	Sharps Container Shield, .125" lead
039-335	Sharps Container Shield, .125" lead
039-350	Dual Sharps Container Shield, .125" lead
039-338	Monoject Container , 4 qt, 10/pkg Fits 039-325, 039-326, 039-350 and 039-330
039-387	Monoject Container , 8 qt, 10/pkg Fits 039-325, 039-326 and 039-330
NMC-182	Sharps Container , 6.2 qt, 12/pkg Fits 039-335

Sharps Container Shields for beta and gamma radiation

- A simple way to dispose of used syringes that may be contaminated with low-energy gamma and beta radiation residue
- Constructed of steel lined with .125" lead and 0.625" aluminum which attenuates gamma radiation, beta radiation and errant bremsstrahlung

039-330 Specifications:

Dimensions: 7.5" L x 11.75" W x 10" H
I.D.: 7" L x 11.25" W x 9.5" H
Lead Shielding: .125" thick
Aluminum Shielding: .0625" thick
Security: Key-locked
Finish: Powder coat
Weight: 48 lb

Sharps Container: 039-338 & 039-387

039-330	Sharps Container Shield, Beta/Gamma
039-338	Monoject Container , 4 qt, 10/pkg Fits 039-325, 039-326, 039-350 and 039-330
039-387	Monoject Container , 8 qt, 10/pkg Fits 039-325, 039-326 and 039-330



We also carry PET Sharps Containers See page 88

Call Pinestar toll-free 1-800-682-2226, to place an order

Shielded Decay Drums with Dolly



- Outer Dimensions: 22 1/2" Diameter x 27" H
(31 1/2" H w/ dolly)
- Lid: 19" Diameter
Includes two heavy-duty handles
- Drop Port: 4.5" Diameter
Includes cap with handle
- Dolly: Included



NMC-12DB 30 Gallon, 1/2" Lead Decay Drum w/ Dolly, 450 lbs
NMC-34DB 30 Gallon, 3/4" Lead Decay Drum w/ Dolly, 600 lbs
NMC-1DB 30 Gallon, 1" Lead Decay Drum w/ Dolly, 1000 lbs

Waste Container Drums with Dolly



- Constructed of 14 gauge steel with regular barrel tops for sealing
- Various sizes and lead wall thicknesses
- Dolly is included to allow for easy movement
- Lid opening 7" x 7"



PTI-1018	10 Gallon, 1/8" Lead, 17.5" Dia x 18" H (22.5" H w/ dolly), 81 lbs
PTI-1014	10 Gallon, 1/4" Lead, 17.5" Dia x 18" H (22.5" H w/ dolly), 147 lbs
PTI-1518	15 Gallon, 1/8" Lead, 17.5" Dia x 29" H (33.5" H w/ dolly), 95 lbs
PTI-1514	15 Gallon, 1/4" Lead, 17.5" Dia x 29" H (33.5" H w/ dolly), 190 lbs
PTI-3018	30 Gallon, 1/8" Lead, 19" Dia x 32" H (36.5" H w/ dolly), 145 lbs
PTI-3014	30 Gallon, 1/4" Lead, 19" Dia x 32" H (36.5" H w/ dolly), 290 lbs
PTI-5518	55 Gallon, 1/8" Lead, 22.5" Dia x 35" H (39.5" H w/ dolly), 200 lbs
PTI-5514	55 Gallon, 1/4" Lead, 22.5" Dia x 35" H (39.5" H w/ dolly), 400 lbs

Shielded Decay Drum with Dolly

- Outer Dimensions: 14" Diameter x 18" H
- Powder Coat Exterior
- Lead shielding: 1/2" thick
- Lid: 17" Diameter
7" x 7" Opening
Includes two heavy-duty handles
- Capacity: 10 gal



PTI-1012 Decay Drum, 10 Gallon, .5" lead w/Dolly, 247 lbs

Low-Energy Shielded Decay Drum

- Sliding access door
- Optional dolly simplifies transport of the decay drum
- Dimensions: 30" H x 19.5" Dia
- Lead shielding: .125", .25" or .5"
- Top Sliding Port: 6.5" x 8.5"
- Capacity: 30 gal
-
- Weight: PTI-039-287 weight 160 lbs, shipping weight 238 lbs
PTI-039-288 weight 280 lbs, shipping weight 358 lbs
PTI-039-289 weight 480 lbs, shipping weight 558 lbs
- Optional Transport Dolly: Weight: 14 lbs



PTI-039-287 Decay Drum, 30 Gallon, .125" lead

PTI-039-288 Decay Drum, 30 Gallon, .25" lead

PTI-039-289 Decan Drum, 30 Gallon, .5" lead

039-286 30-gal capacity Plastic Liner

NMC-DOLL Optional Transport Dolly

Lead-Lined Waste Container *for low-energy gamma waste*



- A must-have item for any facility that generates low-energy gamma radiation waste
- 20 quart container constructed entirely of stainless steel with .125" lead
- Plastic liners make it easy to transfer waste to a decay or disposal site
- Dimensions: 11.9" W x 9.9" D x 15.25" H
- Lead Shielding: .125" thick
- Capacity: 20 qt
- Weight: 51 lb

039-106 **Lead-Lined Waste Container, .125" lead**

Includes 1 pkg of 20 Poly Liners

040-108 **Poly Liner, 20/pkg**



Lead-Lined Waste Container *for low-energy beta and gamma waste*

- Interior is constructed of .063" aluminum and .25" lead, this combination attenuates gamma radiation, beta radiation and errant bremsstrahlung
- Specially designed hatch door protects the user from container contents while open
- Dimensions: 12" W x 22" H x 9" D
- I.D.: 10.5" W x 14.5" H x 8.5" D
- Finish: Powder coat
- Shipping Weight: 120 lb

039-110 **Lead-Lined Waste Container, .25" lead**

Includes 1 pkg of 20 Poly Liners

040-108 **Poly Liner, 20/pkg**

Tri-Top Stainless Steel Waste Container

- Stainless Steel exterior with choice of 4 lead thicknesses: .125", .25", .5" or 1"
- 3" Casters on dolly for easy mobility
- Hinged door shields the technician from the contents of the container
- Weight:
 - .125" lead- 185 lb Outside Dim: 15.5" W x 13" D x 37" H w/ casters
 - .25" lead- 290 lb Outside Dim: 15.5" W x 13" D x 37" H w/ casters
 - .5" lead- 500 lb Outside Dim: 16.75" W x 14.25" D x 40.125" H w/ casters
 - 1" lead- 946 lb Outside Dim: 16.75" W x 14.25" D x 40.125" H w/ casters



TTS-018 **Tri-Top Waste Container, .125" lead**

TTS-014 **Tri-Top Waste Container, .25" lead**

TTS-012 **Tri-Top Waste Container, .5" lead**

TTS-001 **Tri-Top Waste Container, 1" lead**



BETA Syringe Shield

Suitable for Ra-223 and ideal for Zevalin Y-90

- Lead and plastic shielding, designed for Beta
- Suitable for Ra-223 Xofigo® and ideal for Zevalin Y-90
- 007-956 Barrel is constructed of .422" plastic, .062" lead, .125" plastic
- 007-957 Barrel is constructed of .25" plastic, .062" lead, .125" plastic
- Easily sanitized with alcohol wipes



007-956 Beta Syringe Shield, 1 cc
007-957 Beta Syringe Shield, 10 cc

Dual Angle Beta Radiation Shield

- 12 mm thick clear acrylic
- Beta emissions are effectively blocked by 10 mm or thicker clear acrylic

12" W x 17.17" H x 12" D

**Please consult your Radiation Safety Officer
for your institutional guidelines**

RIP-3400 Dual Angle Beta Radiation Shield



Lead-Lined Waste Container - Beta/Gamma



- Designed for Beta isotopes
- **Suitable for Ra-223 and Zevalin Y-90**
- .5" plastic and .125" lead designed to shield
- Beta and Bremsstrahlung radiation
- Adequate for shielding low energy Gamma
- Stainless steel exterior

Specifications:

Dimensions:

Outer: 12" W x 10" D x 15 1/2" H"

Inner: 9" W x 7 1/2" D x 12" H

Shielding: .5" plastic
.125" lead on all 6 sides



PTI-039-106BG Lead-Lined Waste Container-Beta/Gamma

***We Also Have Acrylic Waste Containers
That Can Be Made To Your Specifications!***



Lead Foil



- Easily cut and formed into almost any shape with scissors or utility knife
- 14" wide rolls in 3 thicknesses
- Chemical content is 95.75% lead, 2.5% antimony, 1.75% tin
- Weight: 10 lb

57-006	Lead Foil, 14" W x 22' L x .006" thick
57-015	Lead Foil, 14" W x 9' L x .015" thick
57-030	Lead Foil, 14" W x 4.5' L x .030 thick

Lead Vinyl Sheets



- Smooth, easy to clean material
- Non-absorbent, abrasion-resistant surface
- Very pliable and easy to drape
- 24" wide rolls in 3 thicknesses
- Color: Beige

57-901	Lead Vinyl Sheet, .25 mm lead equiv 24" W x 6' L x 1/32" thick, Weight: 9 lb
57-902	Lead Vinyl Sheet, .5 mm lead equiv 24" W x 4' L x 1/16" thick, Weight: 12 lb
57-904	Lead Vinyl Sheet, 1 mm lead equiv 24" W x 3' L x 1/8" thick, Weight: 18 lb

Lead Paneling



- Lead Lined Paneling is available in any size and lead thickness
- Lead is attached to good quality paneling that is paintable or stainable
- To mount to the wall, we provide a top "Z" shaped mounting bracket that can be securely mounted to wall studs, and small mounting brackets for the bottom



Call for Pricing

Lead Sheets

Lead Sheets are available in the following sizes and thicknesses:

LS-16	4 ft x 8 ft x 1/16"	Weight: 128 lb
LS-18	4 ft x 8 ft x 1/8"	Weight: 256 lb
LS-14	4 ft x 8 ft x 1/4"	Weight: 512 lb

Call for Pricing

Rectangular Lead Bricks

- Convenient solution to temporary or permanent shielding/storage situations
- Easy to stack, unstack and relocate; they provide maximum protection wherever needed
- Standard hardness with a flat, smooth surface



002-246 2" x 4" x 6" Rectangular Brick, 21 lb

002-248 2" x 4" x 8" Rectangular Brick, 27 lb

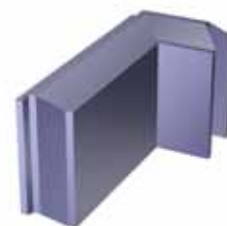
002-146 1" x 4" x 6" Rectangular Brick, 10 lb

002-148 1" x 4" x 8" Rectangular Brick, 13 lb

002-248-INTER 2" x 4" x 8" Interlocking Lead Brick

Interlocking Lead Bricks

- Easy to erect, modify and relocate protective walls and caves of any size
- V-shaped edges eliminate the danger of leakage, common to all straightedged bricks
- Interlocking Lead Bricks create sturdy walls for a safe, protective enclosure



Standard Bricks:

001-100 #1 Standard Wall, 2" x 4" x 4", Weight: 13.2 lb

001-200 #2 Standard Base, 2" x 4" x 4", Weight: 14.9 lb

001-300 #3 Standard Top, 2" x 4" x 2", Weight: 5 lb

Corner Bricks:

001-400 #4 Corner Wall, 2" x 4" x 4", Weight: 13.2 lb

001-500 #5 Corner Base, 2" x 4" x 4", Weight: 14.9 lb

001-600 #6 Corner Top, 2" x 4" x 2", Weight: 5 lb

Reverse Corner Bricks:

001-132 #11 Reverse Corner Wall, 2" x 4" x 4", Weight: 13.2 lb

001-130 #10 Reverse Corner Base, 2" x 4" x 4", Weight: 14.9 lb

001-135 #12 Reverse Corner Top, 2" x 4" x 2", Weight: 5 lb

Left End Cap Bricks:

001-148 #26 Left End Cap Wall, 2" x 4" x 4", Weight: 14.9 lb

001-147 #16 Left End Cap Base, 2" x 4" x 4", Weight: 13.2 lb

001-142 #14 Left End Cap Top, 2" x 4" x 2", Weight: 5.2 lb

Right End Cap Bricks:

001-149 #27 Right End Cap Wall, 2" x 4" x 4", Weight: 14.9 lb

001-145 #15 Right End Cap Base, 2" x 4" x 4", Weight: 13.2 lb

001-140 #13 Right End Cap Top, 2" x 4" x 2", Weight: 5.2 lb

Clear Pb® Lead Plastic Mobile X-ray Barriers



- Sleek design is easy to clean
- 0.5" or 1.0 mm lead equivalency window
- Durable and shatter resistant protection
- Variety of sizes available for shielding 1, 2 or more people
- Large Lead-plastic windows are crystal clear and shatter resistant
- Effortless maneuverability

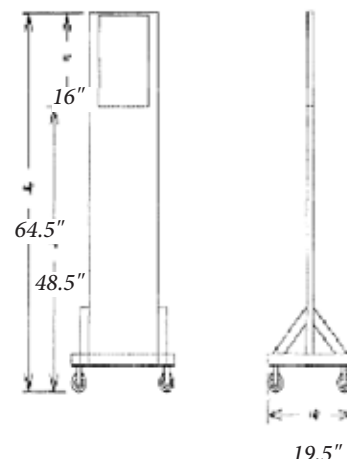
	Overall Size Leg Depth	Window Panel Lead Equiv	Opaque Panel Lead Equiv	Shipping Weight	Price
042-580	75" H x 30" W Leg Depth 10.5"	24" H x 30" W 0.5 mm	48" H x 30" W 0.8 mm	175 lb	
042-582	75" H x 30" W Leg Depth 10.5"	54.5" H x 30" W 0.5 mm	17.5" H x 30" W 0.8 mm	175 lb	
042-585	61.1" H x 49.5" W Leg Depth 10.5"	23.5" H x 46.5" W 1.0 mm	32.5" H x 48" W 1.1 mm	225 lb	
56-602	61" H x 36" W Leg Depth 13"	24" H x 36" W 0.8 mm	34" H x 36" W 0.06" (1.5 mm)	170 lb	
56-616	75" H x 48" W Leg Depth 13"	36" H x 48" W 0.5 mm	36" H x 48" W min 0.03" (0.8 mm)	230 lb	
56-617	75" H x 48" W Leg Depth 13"	36" H x 48" W 1.0 mm	36" H x 48" W 0.06" (1.5 mm)	312 lb	
56-618	75" H x 72" W Leg Depth 13"	36" H x 72" W 0.5 mm	36" H x 48" W min 0.03" (0.8 mm)	334 lb	
56-619	75" H x 72" W Leg Depth 13"	36" H x 72" W 1.0 mm	36" H x 72" W 0.06" (1.5 mm)	409 lb	

Rolling Radiation Shield

- 64.5" Tall x 24" Wide x 20" Deep (front to back)
- Constructed of 2" x 2" tubing and formed steel
- Available in 1/2" or 1/4" lead
- Lead Glass: 4 mm lead equiv.

Custom sizes also available.

Please fax or email your dimensions and we will send you a quote.



NMC-RS12 Rolling Radiation Shield, 1/2" lead
Weight: 350 lb

NMC-RS14 Rolling Radiation Shield, 1/4" lead
Weight: 185 lb

Clear-Lead™ Personal Mobile Barrier

- Unique hour-glass contour provides "hands-on" patient access while providing radiation protection (0.5 mm LE) where it's needed
- Easy-roll, four-caster base and two grip handles
- Positions flush to the table for total patient access

Dimensions: Overall: 24" W x 72" H
Height Adjustable: 62" - 72"
Hour-glass shape window: 48" H x 24" W
Cutouts: 10.3" H x 4" D

Shielding: Clear-Lead acrylic with 0.5 mm LE

Base: Stable, heavy duty, 4" locking caster base with 18" x 17.4" footprint

Weight: 51 lb

Shipping Weight: 125 lb



042-583 Clear-Lead Personal Mobile Barrier

Compact Adjustable Radiation Shield

- Dimensions: 24" W x 24.25" D x 32.5" H
 - Shield: 22" W x 19" H
 - Folding Shelf: 24" W x 5" D
 - Height Adjustable: 35" to 45"
- **Lead Shielding: 1" thick**
- Finish: Powder coat
- Wheel and swivel locks on each caster
- Weight: 230 lb
- Shipping Weight: 366 lb



042-522 Compact Adjustable Radiation Shield

Adjustable Height Mobile Radiation Shield



- Dimensions: 37.75" W x 29" D x 40.5" H
 - Shield: 36" W x 19" H
 - Height Adjustable: 36" to 40.5"
- **Lead-shielding: 1" thick**
- Finish: Powder coat
- Wheel and swivel locks on each caster
- Weight: 446 lb
- Shipping Weight: 560 lb

042-519

Adjustable Height Mobile Radiation Shield



Fixed Rolling Radiation Shield

- **Lead-shielding: 1" thick**
- 24" H x 36" W lead sheet
- Four 5" diameter swivel locking ball bearing casters

48-16

Fixed Rolling Shield, 48" H x 40" W x 24" D

54-16

Fixed Rolling Shield, 54" H x 40" W x 24" D



Soft Adjustable Mobile Shield

- Dimensions: Height: 30" to 48" H x 26 3/4" W x 18" D (at base)
- 24" wide screen provides **.5 mm lead protection**
- Durable white finished frame
- 4 conductive casters
- Shipping Weight: 30 lb
- *Assembly Required*

042-111

Soft Adjustable Mobile Shield

Need a specific size or lead thickness....Ask about a custom shield!!!

Mobile Radiation Shield

- Outer Dimensions: 48 1/4" W x 40 1/4" D x 67 1/4" H
- Lead Shield Dimensions: 1/2" Thickness 24" W x 60 3/4" H
- Exterior: Stainless Steel
- Castors: (2) Lockable, (2) Non-Locking- Swivel



PTI-2460 Mobile Radiation Shield

Adjust-A-Height™ Barrier

- Unique mobile barrier that allows adjustment of the clear acrylic viewing area height to any level between 45 1/2" and 68"
- Overall width of the base is 31" and offers **1mm lead equivalent protection**
- Upper 28" wide panel is made of **0.5mm lead equivalent acrylic**
- Strong, yet lightweight barrier
- 7" legs and casters are arranged to create easy access from the preferred side



PTI-S610 Adjust-A-Height™ Barrier

PET Mobile Radiation Shield

- Designed specifically for PET
- Four 5" swivel casters, two are lockable
- **2" thick lead-shielding**
- 8" x 8" x 4" thick lead glass viewing window
- Constructed of Stainless Steel

Dimensions:

Total Height: 56"
Total Width: 17 1/2"
Total Depth: 27 1/2"
Weight: 700 lb



NMC-PMRS PET Mobile Radiation Shield

Radioisotope Storage Cabinet



- Designed for safely storing radioactive materials
- It features 12 key-locked drawers
- Each drawer is easily removed for cleaning or decontamination
- A card slot identifies contents

Specifications:

Dimensions: 30.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Drawer Dimensions: I.D. 6" W x 11.88" D x 4.5" H

Drawers: Key-locked

Countertop: Stainless steel with 4" backsplash and 1/2" spillproof lip

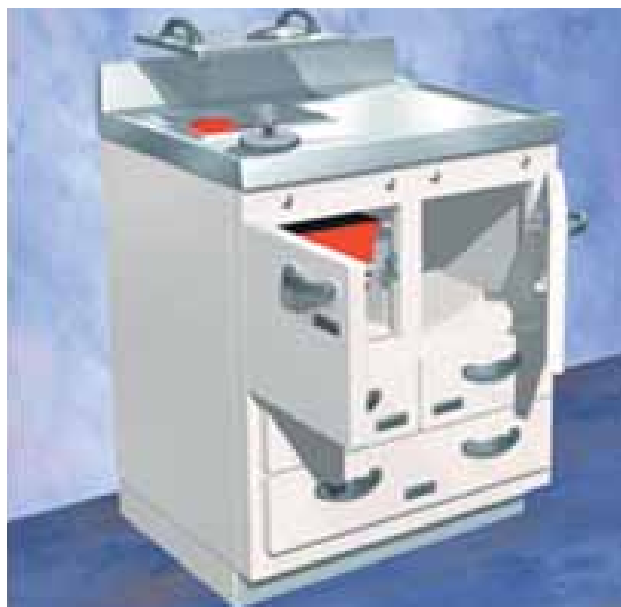
Finish: Powder coat

Weight: 244-110: 1069 lb

244-111: 1415 lb

244-112: 2558 lb

Unit Dose Cabinet



- Designed for hot labs with limited space
- Upper left compartment holds two sharps containers
- Small chute with removable shielded lid allows syringe disposal into front container
- Large rear port allows safe removal of second decayed container
- Phantoms and flood sources can be stored in the bottom drawer which runs the full width of the cabinet

Specifications:

Dimensions: 30.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Drawer Dimensions:

Bottom Drawer: I.D.: 23.5" W x 21.8" D x 4.5" H

Left/Right Drawers: I.D.: 9.38" W x 17.88 D x 4.5" H

Upper Doors: I.D. 11.5" W x 17.62" D x 11" H

Doors & Drawers: Key-locked

Countertop: Stainless steel with 4" backsplash and 1/2" spillproof lip

Finish: Powder coat

Sharps Containers: 039-338 or 039-387

Weight: 244-120: 1156 lb

244-121: 1614 lb

244-122: 2328 lb

A unified countertop is available with multiple cabinets as an option.

Call For Pricing

244-110 Radioisotope Storage Cabinet 1/4" lead

244-111 Radioisotope Storage Cabinet 1/2" lead

244-112 Radioisotope Storage Cabinet 1" lead

244-120 Unit Dose Cabinet 1/4" lead

244-121 Unit Dose Cabinet 1/2" lead

244-122 Unit Dose Cabinet 1" lead

039-338 Monoject container, 4 qt, 10/pkg

039-387 Monoject Container, 8 qt, 10/pkg

Sink and Waste Cabinet



- Performs three functions
- Stainless steel sink allows convenience of running water in the hot lab
- Space under the sink can be used for cold storage
- Waste section is separated from the sink by a lead barrier
- Shielded port allows waste to be dropped into a polyethylene container for storage until decayed

Specifications:

Dimensions: 30.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Sink Section: 10" W x 14" D x 10" H

Integral stainless steel sink with gooseneck faucet and wrist blades; suitable for cold storage

Waste Section: Chute: 6.5" diameter with 1/2" thick lead shielded cover

Container: I.D.: 20.5" H x 11.25" Dia, polyethylene, 7 gal capacity

Door: Key-locked

Countertop: Stainless steel with 4" backsplash and 1/2" spillproof lip

Finish: Powder coat

Weight: 244-130: 849 lb
244-131: 1253 lb
244-132: 2260 lb

Decay Cabinet



- Designed for long and short term storage of decaying radioactive material
- Two adjustable shelves support 100 lb each
- Will accommodate sharps containers and other boxed waste prior to disposal
- Can be used to store flood sources
- Key-locked to prevent unauthorized access

Specifications:

Dimensions: 30.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Shelf Dimensions: 26" W x 18" D, 100 lb capacity, adjustable height

Door: Key-locked

Countertop: Stainless steel with 4" backsplash and 1/2" spillproof lip

Finish: Powder coat

Weight: 244-140: 1010 lb
244-141: 1267 lb
244-142: 2125 lb

A unified countertop is available with multiple cabinets as an option.

Call For Pricing

244-130 Sink & Waste Cabinet 1/4" lead

244-131 Sink & Waste Cabinet 1/2" lead

244-132 Sink & Waste Cabinet 1" lead

244-140 Decay Cabinet 1/4" lead

244-141 Decay Cabinet 1/2" lead

244-142 Decay Cabinet 1" lead

Waste Cabinet



- Designed for storing "non-sharps" radioactive waste
- Spacious chute with shielded cover allows waste to be dropped directly into a polyethylene container prior to decay and disposal

Specifications:

Dimensions: 30.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Chute: 6.5" diameter with 1/2" thick lead shielded cover

Container: 22" H x 17" diameter polyethylene,
16 gal capacity

Door: Key-locked

Countertop: Stainless steel with 4" backsplash and
1/2" spillproof lip

Finish: Powder coat

Weight: 244-150: 913 lb

244-151: 1282 lb

244-152: 2290 lb

Decay and Storage Cabinet



- Performs two functions
- Radioisotopes can be safely stored in drawers
- Cupboard section is for the storage of decaying material
- Drawers are easily removed for cleaning and decontamination
- Decay section includes two heavy duty adjustable shelves

Specifications:

Dimensions: 36.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Drawer Dimensions: I.D.: 6" W x 11.88" D x 4.5" H

Shelf Dimensions: 22" W x 18" D

Door & Drawers: Key-locked

Countertop: Stainless steel with 4" backsplash and
1/2" spillproof lip

Finish: Powder coat

Weight: 244-160: 1103 lb

244-161: 1421 lb

244-162: 2500 lb

A unified countertop is available with multiple cabinets as an option.

Call For Pricing

244-150 Waste Cabinet 1/4" lead

244-151 Waste Cabinet 1/2" lead

244-152 Waste Cabinet 1" lead

244-160 Decay & Storage Cabinet 1/4" lead

244-161 Decay & Storage Cabinet 1/2" lead

244-162 Decay & Storage Cabinet 1" lead

Waste and Storage Cabinet



- Performs two functions
- Radioisotopes can be safely stored in drawers
- Cupboard section is for the storage of "non-sharps" radioactive waste
- Drawers are easily removed for decontamination
- Cupboard section includes a shielded port and 16 gallon polyethylene container

Specifications:

Dimensions: 36.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Drawer Dimensions: I.D.: 6" W x 11.88" D x 4.5" H

Waste Section:

Chute: 6.5" diameter with 1/2" thick lead shielded cover

Container: I.D.: 22" H x 17" Dia polyethylene,
16 gal capacity

Door & Drawers: Key-locked

Countertop: Stainless steel with 4" backsplash and
1/2" spillproof lip

Finish: Powder coat

Weight: 244-170: 863 lb

244-171: 1439 lb

244-172: 2462 lb

Generator and Storage Cabinet



- Provides hot lab radiation protection without hampering the elution process
- Left drawer accommodates top or side loading generators
- Drawer has 1/4" lead shielding on the 3 sides and bottom, front is shielded with 1/2" or 1" lead
- Removable drawer top allows generator replacement
- Trap doors on the top and sides of this drawer provide safe access to the generator
- Two shielded compartments on the right side for storing decaying generators prior to disposal

Specifications:

Dimensions: 36.5" W x 24" D x 36.5" H

Lead Shielding:

Cabinet: 1/2" or 1" thick on all six sides

Drawer: 1/4" thick on five sides

Dividers: 1/2" thick

Drawer Dimensions: I.D.: 15.5" W x 11.9" D x 18.2" H

Doors & Drawer: Key-locked

Countertop: Stainless steel with 4" backsplash and
1/2" spillproof lip

Finish: Powder coat

Weight: 244-181: 1917 lb

244-182: 2815 lb

A unified countertop is available with multiple cabinets as an option.

Call For Pricing

244-170 Waste & Storage Cabinet 1/4" lead

244-171 Waste & Storage Cabinet 1/2" lead

244-172 Waste & Storage Cabinet 1" lead

244-181 Generator & Storage Cabinet, 1/2" lead

244-182 Generator & Storage Cabinet, 1" lead

Preparation Enclosure Base Cabinet



- Designed to support the Lead-Lined Preparation Enclosure (244-007)
- Full height, overlapping double doors with key locks open to an adjustable shelf with a 100 lb capacity
- May be used for decay and storage

Specifications:

Dimensions: 36.5" W x 24" D x 36.5" H

Lead Shielding: 1/4", 1/2" or 1" thick on all 6 sides

Shelf Dimensions: 30" W x 18" D, 100 lb capacity,
adjustable height

Doors: Key-locked

Countertop: Stainless steel with 4" backsplash and
1/2" spillproof lip

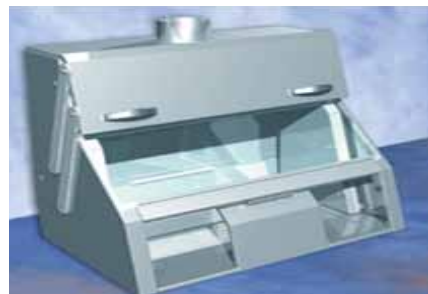
Finish: Powder coat

Weight: 244-190: 1063 lb

244-191: 1540 lb

244-192: 2433 lb

Preparation Enclosure



- Designed for applications that require handling gaseous radioactive materials
- Interior provides ample floor space
- Large lead glass window and halogen light allow safe and unobstructed viewing
- Adjustable shield creates access ports. Swing down shield covers the ports when not in use
- Gaseous materials are directed by a baffle (eliminating dead space) through a stainless steel chimney
- Chimney is connected to external blowers (not supplied) and ductwork (not supplied).

♦ **Blowers create a negative pressure preventing gas leaks**

Specifications:

Dimensions: 36" W x 24" D x 30.5" H

Interior Floor Space: 31" W x 19" D

Lead Shielding: 1/4" thick

Adjustable Shield: 12" W x 10" H x 1/2" thick

Exhaust: 6" diameter chimney, fixed upper and adjustable
lower baffles. Blower and filter not included

Lighting: 110V halogen lamp with two 20-25 watt bulbs,
UL listed

Lead Glass Window:

Dimensions: 34.5" W x 11.8" H x 3/4" thick

Density: 5.05 g/cm³

Finish: # 3 brushed, stainless steel

Weight: 733 lb

A unified countertop is available with multiple cabinets as an option.

Call For Pricing

244-190 Preparation Enclosure

Base Cabinet, 1/4" lead

244-191 Preparation Enclosure

Base Cabinet, 1/2" lead

244-192 Preparation Enclosure

Base Cabinet, 1" lead

244-007 Preparation Enclosure, 1/4" lead,

110V

244-008 Preparation Enclosure, 1/4" lead,

220V

Phantom Cabinet



**Must be ordered as part of a multiple cabinet configuration.
Cannot be ordered individually**

- Used to store flood sources and phantoms on their ends (*does not accommodate 24" circular phantoms*)
- Interior is sectioned by an adjustable divider
- Does not come with a countertop. A unified countertop is configured with a multiple cabinet order

Specifications:

Dimensions: 11.6" W x 24" D x 36" H

Lead Shielding: 1/4" thick

Door: Key-locked

Finish: Powder coat *A unified countertop is available with multiple cabinets as an option.*

Weight: 319 lb

Call For Pricing

244-009 Phantom Cabinet, 1/4" lead

Lead-Lined Storage Safe



- Conveniently loaded from the front
- Ideal for storing large quantities of high-activity radioisotopes
- Shielded with 2" lead and encased in a powder-coated steel jacket
- Features an adjustable shelf
- Lead-lined door is hung with heavy duty non-sagging hinges and is key-locked to prevent unauthorized access
- Built-in lifting handles make it easy to use a hoist or other means to transport this half-ton safe

Specifications:

Dimensions: 17.4" W x 17" D x 19" H

I.D.: 12" W x 12" D x 12" H

Lead Shielding: 2" thick

Door: Key-locked

Finish: Powder coat

Weight: 1050 lb

244-006 Storage Safe, 2" lead

Lead-Lined Refrigerator



Specifications:

Dimensions: 24" W x 25.5" D x 34.25" H

Lead Shielding: 1/8" thick

Capacity: 5.3 cu ft

Door: Key-locked

Finish: Powder coat

Power: 120V/ 230V, 60 Hz, 2.4 amps

Weight: 340 lb

Shipping Weight: 390 lb

- Freestanding or under-the-counter unit
- 5.3 cubic foot capacity
- Automatic defrost
- Energy Star qualified- saves energy, money and natural resources
- Two adjustable stainless steel shelves

Are you looking for a refrigerator with a different lead thickness?

See page 64

244-004 Lead Lined Refrigerator 1/8" lead, 120V

244-005 Lead Lined Refrigerator 1/8" lead, 230V

Inside view of adjustable shelves



Stainless Steel Decay Cabinet

- Features two heavy-duty adjustable shelves
- Ideal for long term storage of decaying material
- Shelves can support up to 100 lb each and measure 26" W x 18" D
- Door is key-locked to prevent unauthorized access
- Appropriate storage for decay of sharps containers and other boxed waste prior to disposal
- Can be used to store flood sources

Dimensions: 28 1/2" W x 36 1/2" H x 30" D

Lead Shielding: 1/4"

Door: Key-locked

Weight: 900 lbs

Can also be customized to your specifications, call for more information

234-204

Stainless Steel Decay Cabinet, 1/4" lead

Custom Lead-Lined Modular Cabinet



Drop Port

- Flat surface countertop without a backsplash
- Drop port with shielded cover
- Two adjustable shelves hold up to 100 lb

Cabinet Specifications:

Outside Dimensions: 60"W x 30"D x 36"H
Lead Shielding: 1/2" thick on all 6 sides
2" thick on rt side door
Doors: Three (key-locked)
Finish: Powder coat
Weight: 2900 lb

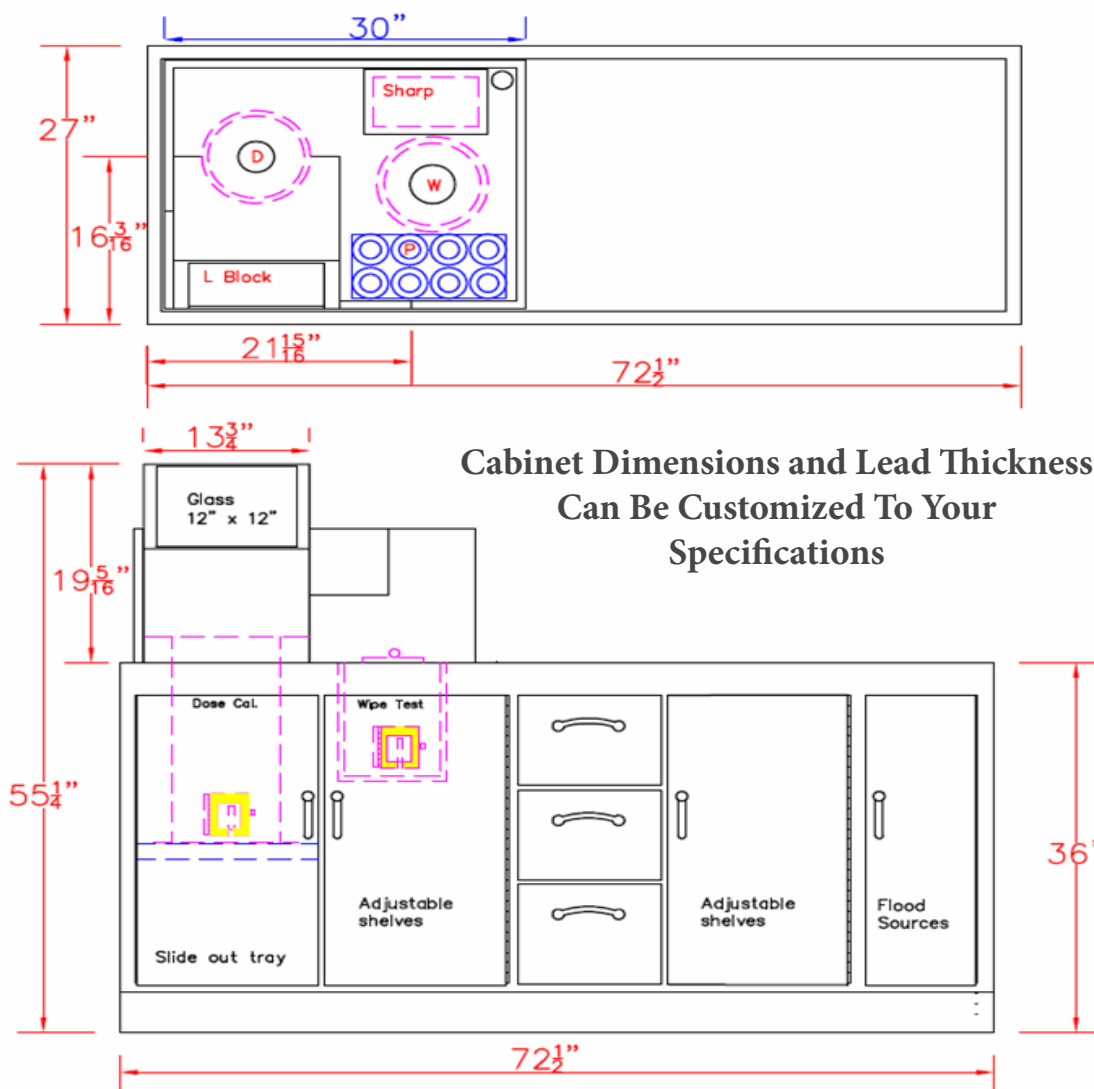
Drop Port Specifications:

Dimensions: 8" Diameter Retainer Lip
3" Diameter, 7 1/2" Long Chute
Lead Shielding: .375" thick

MC-6050

Custom Lead-lined Modular Cabinet

Lead-Lined Cabinet For Nuclear Medicine



- 1/4" lead lining on front, back, top, sides, doors and drawers
- Non-spill lip (marine edge) on top surface
- **L-block with 1/2" lead lining in front with 12" x 12" lead glass (2mm lead equivalent)**
- **Cave with 1/2" lead lining and arm slots for your arms**
- **Left Side Compartment:** 13.5" W x 25" D x 26 11/16" H
1/4" lead-lined Dose Calibrator Chamber Shield
- **Second Compartment From Left:** 13.5" W x 25" D x 26 11/16" H
1/2" lead-lined Wipe Test Counter Chamber Shield
1/4" lead-lined Sharps Container Shield
1/4" lead lined Pig Holder
- **3 Drawer Compartment:** Inner Dimensions: 10.5" W x 24" D x 7.5" H
- **Second Door from Right:** 13 3/8" W x 25" D x 26 11/16" H

Shielded Storage Cabinet

The .25" lead glass sliding doors allow the viewing of materials without the extra exposure of having to open the doors.

Outside Dimensions: 15.5" W x 10" H x 7.5" D
Inside Dimensions: 14.125" W x 7.75" H x 5.75" D
Lead Shielding: .0625" thick
Lead Glass Window: .25" thick
Weight: 35 lb



154-090 Shielded Storage Cabinet, .0625" lead

Stainless Steel Shielded Storage Cabinet

A must have for any laboratory that handles radioactive materials

- Available in 1/8" or 1/4" lead
- The lead shielding provides an extra measure of safety over the use of lead pigs alone
- Sliding cabinet doors are lined with lead

Outside Dimensions: 15.5" W x 10" H x 7.5" D
Inside Dimensions: 14.125" W x 7.75" H x 5.75" D
Lead Shielding: 1/8" or 1/4"
Weight: SSC-18: 50.5 lb
SSC-14: 86 lb



SSC-18 Shielded Storage Cabinet, 1/8" lead

SSC-14 Shielded Storage Cabinet, 1/4" lead

Shielded Generator Containment Cabinet

- Has two sliding doors on top
- Constructed of 1/8" stainless steel and the generator containment area is lined with 1/2" lead on all sides, top and bottom
- Storage shelf underneath the containment area
- Interior of cabinet is painted
- Exterior of cabinet is covered in stainless steel
- Available with or without heavy duty casters

Outside Dimensions: 48" W x 24" D x 40" H
Containment Area Dimensions: 47" W x 23" D x 19.5" H
Weight: 900 lb



NMC-SG Shielded Generator Containment Cabinet

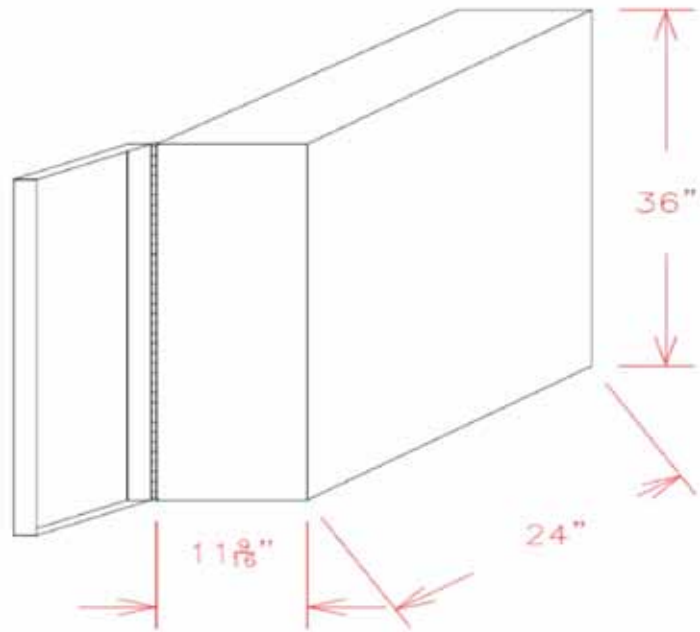
Lead-Lined Phantom Cabinet

Great For Storing Fillable or Co-57 Sheet Sources

- 1/4" Lead Shielding
- Stainless interior and exterior
- Lockable front hinged door

Outside Dimensions: 11.6" W x 24" D x 36" H
(height includes countertop)

Weight: 350 lb



PC-SS

Lead-Lined Phantom Cabinet

Stainless Steel Lead-Lined Box On Wheels



- 1/4" Lead Shielding
- Stainless interior and exterior
- Lockable lid with hinged door and handles
- Wheels included with unit

Outside Dimensions: 16" W x 16" D x 32 1/2" H
(including wheels)

Inner Dimensions: 14 3/4" W x 14 3/4" D x 25" H

Top Hinged Opening: 7" x 7"

Weight: 506 lb



Lockable Lid and Hinged Door

SS-LBW

Stainless Steel Lead-Lined Box On Wheels

Call Pinestar toll-free 1-800-682-2226, to place an order

Stainless Steel Cabinet 2 Drawer- 2 Door Cabinet

- Sharps chute with leaded cover on left side. Your sharps container will sit on the top left side of the shelf.
- Two front doors, keylocked
- Two adjustable shelves, 100 lb capacity
- Stainless Steel countertop with 4" backsplash (marine edge optional)
- Two drawers: 14" W x 16" Deep
- Stainless Steel Interior and Exterior

Dimensions: 36" W x 24" D x 36" H

Lead Shielding: 1/8", 1/4" or 1/2"

Weight: 1/8" lead: 450 lb

1/4" lead: 750 lb

1/2" lead: 1500 lb

234-905 **Stainless Steel 2 Drawer-2 Door 1/8" lead**

234-906 **Stainless Steel 2 Drawer-2 Door 1/4" lead**

234-907 **Stainless Steel 2 Drawer-2 Door 1/2" lead**

Can also be customized to your specifications, call for more information



Nuclear Medicine Cabinet



Page 19

PET Table



Page 81

Generator Decay Module

- Stainless steel inside and outside
- Two slide out trays aid in the rotation of heavy items
- Can be used to store a variety of items prior to disposable
- Key-locked door
- Leveling feet
- Available in 1/4", 1/2" or 3/4" lead shielding

Outside Dimensions: 24"W x 20"D x 32"H with feet
Tray Dimensions: 21 3/8" W x 26" D
Tray Capacity: 500 lbs.
Door: Key-locked
Finish: Stainless steel inside and outside
Lead Shielding: 1/4", 1/2" 3/4"

Weight: 1/4" lead: 475 lbs
1/2" lead: 825 lbs
3/4" lead: 1173 lbs



GDM-014 Generator Decay Module, 1/4" lead
GDM-012 Generator Decay Module, 1/2" lead
GDM-034 Generator Decay Module, 3/4" lead

PET Cabinet



Page 80

PET Cabinet With Options



Page 79

Lead-Lined Storage Safe



- Stainless steel 2" lead-lined safe
- Key locked door
- This unit can be lifted from above with removeable eyebolts or with a pallet jack
- Adjustable heavy duty shelf

Specifications:

Dimensions:

Outer: 17 1/2" W x 17 1/2" D x 22" H (eyebolts removed)

Inner: 13.5" W x 14" D x 14.5" H

Shielding: 2" lead on all 6 sides

Door latch: Key-locked

PTI-006

Lead-Lined Storage Safe 2" lead

Lead-Lined Refrigerator

- Laboratory quality refrigerator for uniform temperature operation
- Digital microprocessor LED control with automatic tracking alarms and remote alarm contacts
- Three adjustable wire shelves
- Front to back breathable airflow design for low maintenance and no side or top clearance requirements



Specifications:

Outside Dimensions:

23.6"W x 26.2"D x 34.6"H

Lead Shielding: 1/8", 1/4" or 1/2"

Capacity: 6.1 cu ft

Temperature: 1° C to 14° C

Door: Key-locked

Finish: Stainless Steel

Power: 115V /, 60 Hz

Specifications Subject to Change

LLR-18

Lead-Lined Refrigerator, 1/8" Lead, Wt. 290 lbs. Shipping Wt. 340 lbs

LLR-14

Lead-Lined Refrigerator, 1/4" Lead, Wt. 440 lbs. Shipping Wt. 490 lbs

LLR-12

Lead-Lined Refrigerator, 1/2" Lead, Wt. 770 lbs. Shipping Wt. 820 lbs

Lead-Lined Waste Container - Beta/Gamma



- Designed for Beta isotopes
- Suitable for Ra-223 and Zevalin Y-90
- .5" plastic and .125" lead designed to shield
- Beta and Bremsstrahlung radiation
- Adequate for shielding low energy Gamma
- Stainless steel exterior

Specifications:

Dimensions:

Outer: 12" W x 10" D x 15 1/2" H"

Inner: 9" W x 7 1/2" D x 12" H

Shielding: .5" plastic

.125" lead on all 6 sides



Inside View
.5" plastic shielding

PTI-039-106BG

Lead-Lined Waste Container-Beta/Gamma

**Call us with your dimensions and lead thickness
and we will quote you a custom lead lined box
built to suit your needs**



Figure A

**Our Custom Lead-Lined
Storage Boxes Are A Great
Option For Storage Of Your
Data Spectrum
SPECT or PET Phantom
See Page 149**



Figure E

Examples of Custom Lead Lined Boxes



Figure B

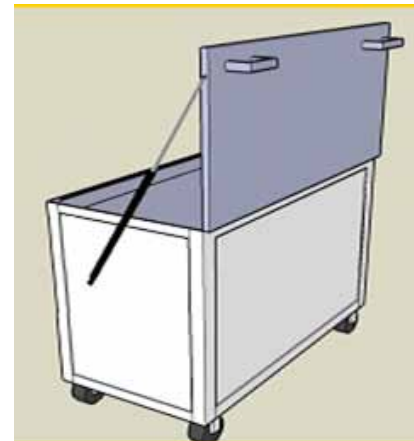


Figure D



Pass-Thru Box

Figure C

Radioiodine Fume Hood



- Meets the demands of iodination procedures
- Constructed of 3/8" clear, rugged Plexiglas
- Provides a large internal work area with spacious arm ports to allow maximum uninhibited manipulation of material within the unit
- A swing-away front door permits easy placement and retrieval of items
- The air baffle assures even flow speed of air out of the box while negative air flow speed can be adjusted from 0 to a maximum of 50 CFM
- Includes a disposable 12" x 12" x 1" metal frame filter that contains TEDA charcoal, trapping 90% of the radioiodine produced
- Can accommodate two filters if needed

Specifications:

Dimensions: 24" W x 21" D x 36" H

Front Door (Swing-Away): 24" L x 13" H

Motor: 115 VAC, 50/60 Hz, 1 amp fuse; 230 VAC uses a separate external step down transformer

Weight: 90 lb

Shipping Weight: 114 lb

190-210 Radioiodine Fume Hood, 115V

Includes: Charcoal filter, TEDA

042-016 Mini Shield, .5" Lead, 2 mm Lead Glass

See page 67

087-112 Converter, 230V

112-036 Charcoal Filter (TEDA)

12" x 12" x 1" metal frame

Fume Hood



- Used during the preparation of I-131 and other radiopharmaceuticals
- Designed to be used with an L-Block shield that slides under the front of the Fume Hood (L-Block not included)
- Constructed of stainless steel and rugged polycarbonate
- Provides a spacious work area with ample arm ports that allow easy access to the work area
- Hinged front door allows easy placement and retrieval of items
- Fan and air baffle assure even flow of air out of the hood
- The negative air flow speed can be easily adjusted from 0 to a maximum of 80 CFM
- Fan motor is 120 VAC, 60 Hz
- Two 12" x 12" x 1" disposable charcoal filters

Specifications:

Dimensions: O.D.: 24" W x 20" D x 36" H

Weight: 110 lb

I-131FH Fume Hood

FH-CF Charcoal Filter

I-131 LB L-Block to fit under the Hood

Dimensions: L-Block 12.5" W x 23" H
Glass 12" x 16" x 5/8"

(4mm lead equivalency)

Front door hinges are placed forward to allow easy opening for cleaning

Tabletop Shields

Two sizes available; Mini or Standard Beta/Gamma

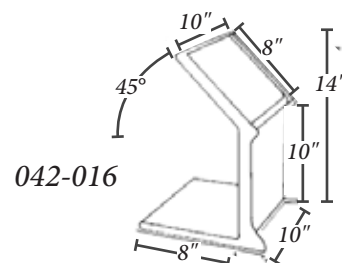
- Dimensions: see drawings or call for dimensions
- Lead Shielding: .5" thick
- Viewing Panel: Lead Equivalency: 2 mm (an optional 2nd panel of lead glass can be paired to achieve 4 mm lead equivalency)
042-224 has clear Plexiglas® for Beta Shielding
- 042-224 features a built in splash tray with a spill proof lip for fast, contained clean up
- Viewing Area: 042-016: 8" H x 9" W
042-224: 11.1" H x 11.1" W
- Shipping weight: 042-016: 40 lb, 042-224: 79 lb
017-810: 6 lb, 042-226: 10 lb
042-227: 42 lb
042-228: 10 lb



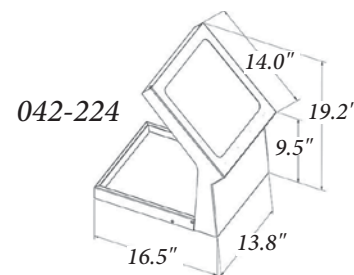
042-016
Mini



042-224
Standard



042-016



042-224

Mini Tabletop Shield

042-016 Mini Shield, .5" lead, 2.0 mm lead glass

017-810 Mini Lead Glass Plate, 2.0 mm, 8" x 10"

Standard Beta/Gamma Tabletop Shield

042-224 Standard Beta/Gamma Shield, .5" lead
With 2.0 mm lead equiv. glass and Plexiglas® panel

042-226 Bottom Shield, .25" lead

042-227 Side Shield, .25" lead

042-228 Lead Glass Plate, 8 mm, thick, 12" x 12"

15°Clear Pb® Acrylic Tabletop Shields

- Clear-Pb® Acrylic Tabletop Shields provide protection from radiation exposure when working with radionuclides.
- Leaded acrylic, "Clear Pb" is made from an acrylic copolymer resin into which lead is chemically introduced as an organic salt compound.
- "Clear Pb" contains 30% lead by weight.
- Its physical properties are similar to those of conventional acrylic resins.
- Three sizes, complete with all assembly hardware and sturdy plastic supports.
- Lead equivalency of 1.5 mm.

16A-1812 Standard Clear Pb Acrylic Tabletop Shield

18" H x 12" W x 7.5" D, 25 lb

16A-2415 Jumbo Clear Pb Acrylic Tabletop Shield

24" H x 15" W x 10" D, 39.5 lb

16A-129 Mini Clear Pb Acrylic Tabletop Shield

12" H x 9" W x 7.5" D, 15 lb



797 Dose Dispensing Hoods



797-MT

- The 797 Dose Dispensing Hood is designed to economically assist nuclear medicine departments with compliance of USP General Chapter <797> Pharmaceutical Compounding- Sterile Preparations.
- This ultra-compact table-top hood provides an **ISO Class 5 (old Class 100) environment** and is designed around the Mini Table Top L-Block (042-016) and the Beta Gamma Table Top L-Block (042-224). (Page 63)
- (Note: L-Block shields are not included)



797-BG

The hood is constructed of stainless steel with clear polycarbonate sides. Each side has an ample hole for easy hand insertion. The sides are hinged on the bottom and fold down to allow easy cleaning of the hood. A top-mounted HEPA filter and fan assembly is included to provide the ISO Class 5 environment. Air is exhausted via openings in the front, back and sides.

Model 797 Hood for the **Mini Table Top L-Block**

797-MT Model 797 Dose Dispensing Hood for Mini L-Block
13.5" W x 21" D x 23" H, Weight: 33 lb

Optional Lead Shielding for 797-MT		Weight
797-MT-PBBACK18	1/8" Lead for Back of 797-MT	8 lb
797-MT-PBBT18	1/8" Lead for Bottom of 797-MT	11 lb
797-MT-PBS18	1/8" Lead for Side of 797-MT	10 lb + 10 lb
797-LS	Model 797- Light & Switch	
<i>Optional Light & Switch adds 2 1/2" to depth</i>		

Model 797 Hood for **Beta Gamma Table Top L-Block**

797-BG Model 797 Dose Dispensing Hood for Beta Gamma L-Block
15.5" W x 24" D x 28" H, Weight: 37 lb

Optional Lead Shielding for 797-BG		Weight
797-BG-PBBACK18	1/8" Lead for Back of 797-BG	24 lb
797-BG-PBBT18	1/8" Lead for Bottom of 797-BG	40 lb
797-BG-PBS18	1/8" Lead for Side of 797-BG	26 lb + 26 lb
797-LS	Model 797- Light & Switch	
<i>Optional Light & Switch adds 2 1/2" to depth</i>		

797-AW66 70% 6" x 6" Sterile Alcohol Wipes, 100/case

*Note: Table Top L-Block Shields are not included, please refer to page 67
Specifications are subject to change without notice*

797 Dose Dispensing Hood with Lead and Built-in L-Block 2 Sizes Available - Mini or Standard



797-LB-MT and 797-LB-BG

- 1/2" lead lining on the front
- 1/8" lead lining on the sides, back and bottom
- Rear mounted light is included
- Constructed of stainless steel with the encased lead
- Ample hole in each side for easy hand insertion
- Bottom hinged sides fold down to allow easy cleaning of the hood
- Top-mounted HEPA filter and fan assembly to provide the **ISO Class 5 environment**. Air is exhausted via openings in the front, back and sides

Mini

797-LB-MT Dimensions:

Glass: 8" x 10" viewing area with 4 mm lead glass

Dimensions: 24.75" H x 14" W x 21.75" D

Weight: 100 lb

Standard

797-LB-BG Dimensions:

Glass: 12" x 12" viewing area with 4 mm lead glass

Dimensions: 32.25" H x 15.5" W x 28" D

Weight: 150 lb

797-LB-MT **Mini** 797 Dose Dispensing
Hood w/ Built-in L-Block

797-LB-BG **Standard** 797 Dose Dispensing
Hood w/ Built-in L-Block

797 Dose Dispensing Hood with Built in L-Block
For PET
See Next Page

PET - 797 Dose Dispensing Hood Features a 1 1/2" Lead-Lined L-Block

**Includes Top Mounted
HEPA Filter and Fan Assembly**



797-LB-MT-PET

- 1 1/2" lead lining on the front
- 3/8" lead lining sides and back
- 1 1/2" lead lining on the bottom
- Rear mounted light is included
- Constructed of stainless steel with the encased lead
- Ample hole in each side for easy hand insertion
- Bottom hinged sides fold down to allow easy cleaning of the hood
- Top-mounted HEPA filter and fan assembly to provide the **ISO Class 5 environment**. Air is exhausted via openings in the front, back and sides

**Combines a 1 1/2" Lead-Lined L-Block
and a Lead-Lined 797 Dose Dispensing Hood
into One Convenient Unit**

797-LB-MT-PET Dimensions:

Glass: 8" x 8 x 4" lead glass viewing area

Dimensions: 15" W x 24" D x 27"H

Weight: 600 lbs

**797-LB-MT-PET PET 797 Dose Dispensing
Hood w/ Built-in L-Block**



Lead Recycling Program Scrap Lead Disposal



Do you have scrap lead that needs to be disposed of?

Pinestar pays competitive rates for scrap lead products
No need for you to pay shipping or arrange logistics

Call Pinestar at 800-682-2226 and we will ship a
recycling box already on a pallet out to you

Place your unwanted lead/ lead lined scrap in the provided recycle container
Minimum 500 lb

- Call Pinestar
- We will arrange Pickup
- Drop off a new recycling container if needed
- Weigh scrap and issue payment or credit



Processor is fully licensed and regulated for handling and
recycling in a safe manner



Note: Lead aprons are not accepted

Call 800-682-2226 for information

MRI Compatible Syringe Shield for PET



MRI Compatible Syringe Shield for PET with Nylon Screw

- 3ml shield 1.22” outer Ø x 0.51” ø x 2.67” long
- 5 ml shield 1.33” outer Ø x 0.62” ø x 2.52 long
- 10 ml shield 1.45” outer Ø x 0.74” ø x 3.34” long

9 mm Tungsten

The material has been certified as MRI-compatible

3-MRI/P	3 cc	MRI Compatible Syringe Shield for PET
5-MRI/P	5 cc	MRI Compatible Syringe Shield for PET
10-MRI/P	10 cc	MRI Compatible Syringe Shield for PET

MRI-000	Replacement Screws for the above Syringe Shields
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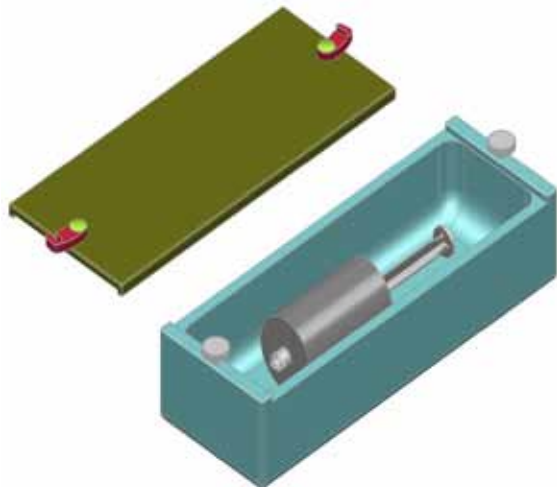
PET/MRI Syringe Shield



- **MR Conditional for 3T**
- Ideal for the administration of high-energy isotopes for PET/MRI imaging
- Constructed of **9mm tungsten** (attenuated F-18 by 88%)
- 5.6 high density flush mounted lead glass window
- White reflective surface within the shield improves viewing of syringe markings
- **Clearly labeled and engraved as MR Safe**
- Easily sanitized with alcohol wipes

007-961	PET/MR Syringe Shield, 3 cc
007-962	PET/MR Syringe Shield, 5 cc

Non-Magnetic Syringe Transport Box for MRI



Constructed of MRI compatible tungsten

- 9 mm tungsten shielding on short ends
- 6.5 mm tungsten on sides and top
- Nylon thumb screws
- Weight: 17.85 lb

Dimensions: 9.4"H x 3.2"W x 2"D

MRI-TB	Non-magnetic Syringe Transport Box
--------	------------------------------------

MRI Stretcher

- Heavy-duty, all aluminum non-magnetic stretcher, ideal unit for MRI patient transport
- Attractive white powder coat
- Comes complete with mattress, restraining straps and retractable guard rails
- Accommodates up to a 500 lb patient safely and comfortably
- Four 5" ball-bearing swivel casters that lock firmly to secure the stretcher in place when positioned
- Optional IV Pole

Dimensions:

Tabletop:	72" L x 24" W
Overall::	74.5" L x 27.75" W x 34" H
Wheels:	5" locking casters

Finish: Powder coat

Shipping Weight: 200 lb
Patient Capacity: 500 lb



240-100	MRI Stretcher
240-110	MRI Stretcher with Fowler Back
240-189	MRI IV Pole

MRI Safety Step Stool

- Rugged, stainless steel, non-magnetic stool
- Oversized platform and 34" high handle rail
- Deep platform has non-slip mat for added safety
- Grip cups on the bottom of each leg hold the stool firmly in place

Dimensions: 13" D x 18" W x 41.5"
Step: 16" W x 12" D
Step Height: 8.5" H
Ship Weight: 22 lb
Weight Capacity: 500 lb



240-075	MRI Safety Step Stool
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Ear Plugs

- Convenient, noise-attenuating ear plugs
- Ideal for those high-decibel procedures
- Self-adjusting, expandable foam make the ear plugs comfortable for prolonged usage
- Latex free



240-382	Ear Plugs, 200 pairs/box
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Generator Elution - Kit Preparation - Dose Drawing Pharmacy Isolator

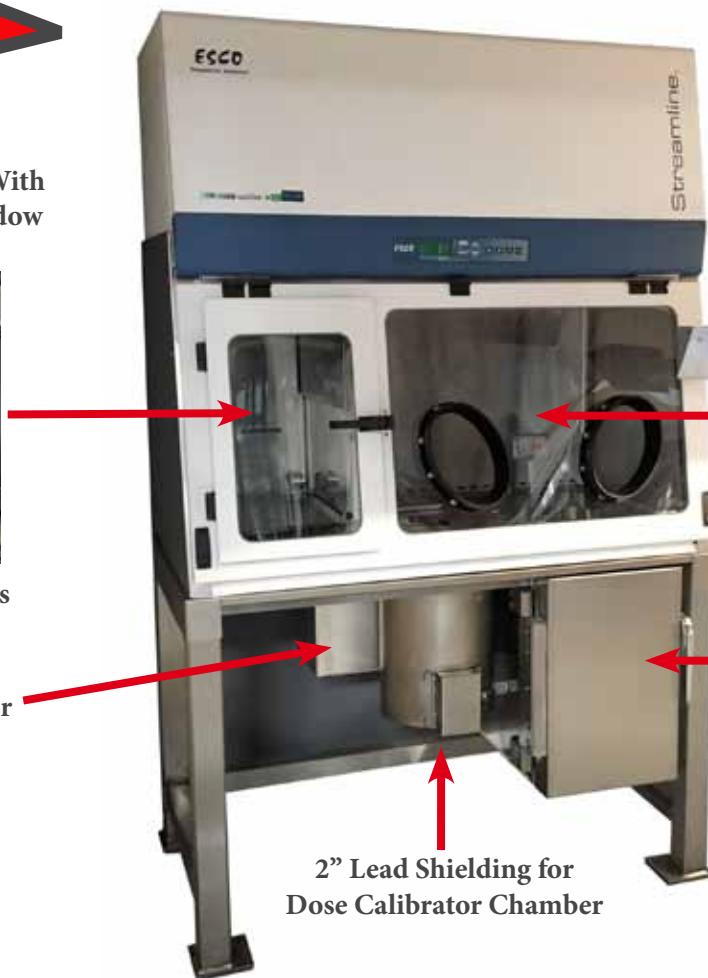


Pass Through Area With
1/2" Lead Glass Window
Window



Inside View of Pass
Through Area

2" Lead Shielding for
Sharps Container



Articulate Arm For
Dose Calibrator
Readout Unit

1/2" Lead-Lined L-Block



Inside View of Generator
Lifting System and
Sliding Drawer

2" Lead Shielding for
Dose Calibrator Chamber

Specifications

External Dimensions With Stand:	57" W x 36" D x 88" - 90" H
Internal Dimensions Work Area:	33.1" W x 24" D x 26.4" H
Pass Through:	13.9" W x 24" D x 26.4" H

- 1/2" Lead Lined L-Block
- 1/4" Lead Shielding on back, bottom and sides of Isolator
- 2" Lead Shielding for Dose Calibrator Chamber
- 2" Lead Shielding for Sharps Container
- Articulate Arm for Dose Calibrator Readout Unit
- 1/2" Thick Pass Through Lead Glass Window
- Lead-Lined Elution Vial with Adjustable Holder on Stand
- 3" Lead Shielding Generator Shield with Lift
- Slide drawer to remove existing generator and install a new generator

**** Note: Does Not Include Dose Calibrator - Specifications Are Subject To Change ****

Call for Pricing

- Pharmacy Isolator is designed to assist Nuclear Medicine Departments and Radiopharmacies with compliance of *USP 797 Pharmaceuticals Compounding Sterile Preparations*
- ULPA Filters with a typical efficiency of 99.999% at 0.1 to 0.3 microns provide ISO Class 3 air cleanliness
- Sentinel Gold™ Microprocessor controller supervises all functions and monitors airflow and pressures in real-time
- Work zone and pass-thru interchange are under negative pressure to the room in order to maintain operator protection in the event of a breach in the barrier isolation system
- Ergonomically angled front and oval gloveports improve reach and comfort
- Safe-change cuff rings permit glove changes with zero risk of contaminating the work zone
- ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination
- Front panel is fully hinged for easy cleaning
- Vertical sliding door between pass-thru and work zone area
- Airlock pass-thru ensures work zone remains sterile



General Specification for Pharmacy Isolator, 4 ft model

External Dimension with Stand:	59.9" W x 32.3" D x 88.6" H
Internal Dimension: Main:	33.1" W x 24.0" D x 26.4" H
Pass-thru:	13.9" W x 24.0" D x 26.4" H
Electrical:	110- 120V, 60 Hz

Features:

- ISO Class 3- Negative Pressure Recirculating Airflow
- Lead Glass Window 12" x 16" x 1" thick
- Body Shielding lead encased in stainless steel, 1/8", 1/4" or 1/2" lead
- Dose Calibrator drop in shield with 1/8", 1/4" or 1/2" lead
- Sharps Container mounted under table, 1/8", 1/4" or 1/2" lead
- IV Bar Kit with 6 hooks
- Articulate Arm for Dose Calibrator Readout Unit

Options:

- Exhaust Carbon Filter
- Thimble Kit for External Exhaust
- Permanent Adjustable Stand 26" to 36"

Specifications are subject to change

Call for Pricing

Call Pinestar toll-free 1-800-682-2226, to place an order

Labculture® Biological Safety Cabinets

Class II, Type A2 Standard Exhaust

Class II, Type B2 Total Exhaust



Note: This picture is not representative of the custom model we provide; Picture is of the cabinet before optional items are incorporated

Labculture® Class II, Type A2 Standard Exhaust Biological Safety Cabinet

- Integrated Filtration System- A combination of a supply ULPA filter and an exhaust filter give this cabinet a fully integrated performance envelope for product, operator and environmental protection
- Containment and Protection- The airflow ration of 63% to 37% exhaust increases operator protection beyond the 70% / 30% ratio of conventional biological safety cabinets

Labculture® Class II, Type B2 Total Exhaust Biological Safety Cabinet

- Integrated Filtration System- The combination of a supply ULPA filter and an exhaust HEPA filter gives the Labculture cabinet a fully integrated performance envelope for product, operator and environmental protection
- User Interface- The 10" angled front, frameless sash, raised armrest and a centrally mounted LCD display deliver outstanding ergonomics



The Biological Safety Cabinets are designed to meet the new requirements of USP 797 for Pharmaceutical Compounding Sterile Preparation.

They Provide an ISO Class 5 Environment.

Type A2 Standard Exhaust

Type B2 Total Exhaust for I-131 and Xenon

- ULPA Filter
- ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination
- Labculture: Esco Sentinel™ microprocessor
- Laminar Air Flow

General Specifications for Biological Safety Cabinets, 4 ft models

Labculture® Class II, Type A2 Standard Exhaust

External Dimension without Stand:	56" W x 33.5" D x 60.6" H
Internal Dimension:	50" W x 24.5" D x 26.4" H
Total Height with Stand:	91.6" to 101.6"
Electrical:	110 - 120V, 60 Hz

Labculture® Class II, Type B2 Total Exhaust

External Dimension without Stand:	56" W x 33.5" D x 63.3" H
Internal Dimension:	50" W x 24.5" D x 28.1" H
Total Height with Stand:	88.7" to 98.7"
Electrical:	110- 120V, 60 Hz

Options for Biological Safety Cabinets

- Permanent Adjustable Stand 26" to 36"
- 1/8", 1/4" or 1/2" lead on both sides, bottom and back
- Dose Calibrator Drop in Shield with lead
- Dose Calibrator Readout Unit mounted
- Sharp container with Lead, mounted under table with hole cut out for waste
- Sliding L-Block with 4 mm lead glass
- 5 ft and 6 ft models also available
- Thimble Kit for External Exhaust
- UV Lamp

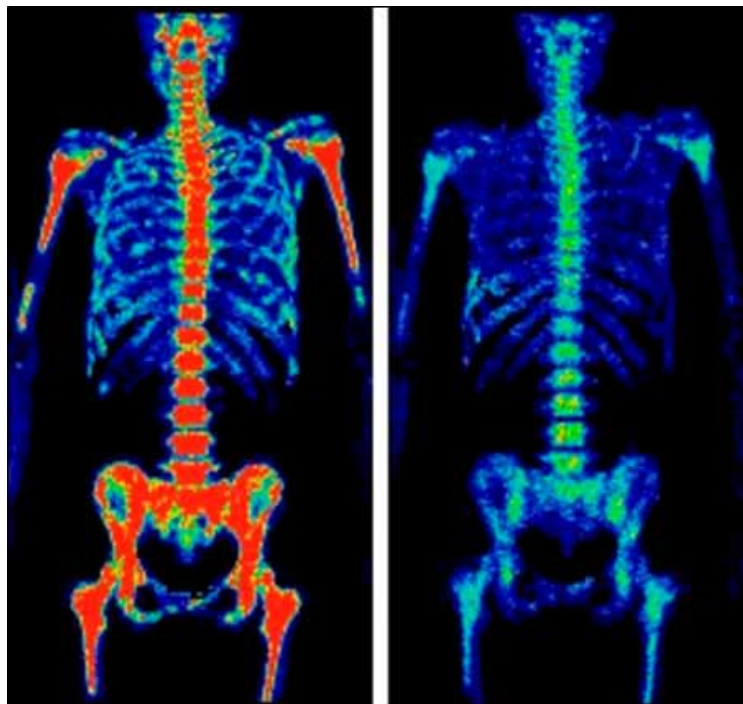
Specifications are subject to change

Call for Pricing

Call Pinestar toll-free 1-800-682-2226, to place an order

PET

HOT LAB PACKAGE



Pinestar Technology Inc. offers a comprehensive
PET Hot Lab Package

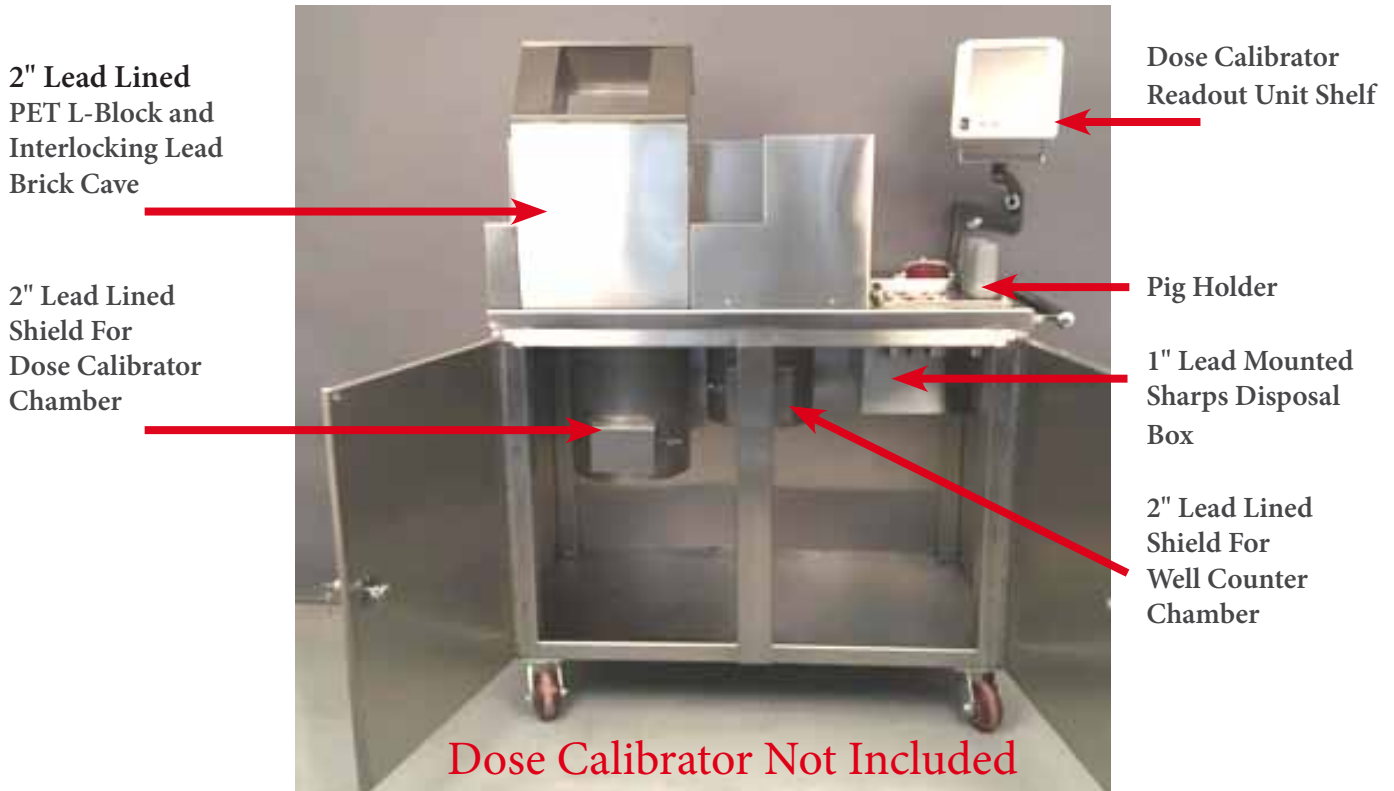
Below is a standard list of items you will need for a
New PET Department

Dose Calibrator
Positron Shield
Auxiliary Shield
PET Syringe Shield, 3 cc
PET Syringe Shield, 5 cc
PET Sharps Container Shield
Sharps Container
PET L-Block
Interlocking Lead Brick Cave
Syringe Carrier
Forceps

Lead Lined Waste Container
Minor Emergency Spill Kit
Co-57 Reference Source
Cs-137 Reference Source
Cs-137 Rod Source .5 μ Ci
Contoured Leg Rest
Cardboard & Plastic Signs
Radiacwash/ Bind-It
Ludlum 14C Survey Meter
Probe
Check Source
Check Source Holder

PETSSC-WCP

PET Stainless Steel Cabinet, 1/4" lead Extended Brick Cave Encompasses L-Block and Shield For Dose Calibrator and Well Chamber



Dimensions: 48 1/2" W (with handle) x 27"D x 57"H (to the top of the L-Block)
Inner Dimensions: 26 1/4" W x 18"D

- Handle can be placed on either side
- Lockable front doors
- Shielded box for 610R container, 1" lead
- Shielded dose calibrator chamber, 2" lead
- Shielded well counter chamber, 2" lead
- Removeable pig holder that accommodates 6 pigs
- PET L-Block with "C" shaped bite cutout
2" lead with 8" x 8" x 4" lead glass
- Interlocking lead brick cave, 2" lead
- Shipping weight 3200 lbs



Call for Pricing

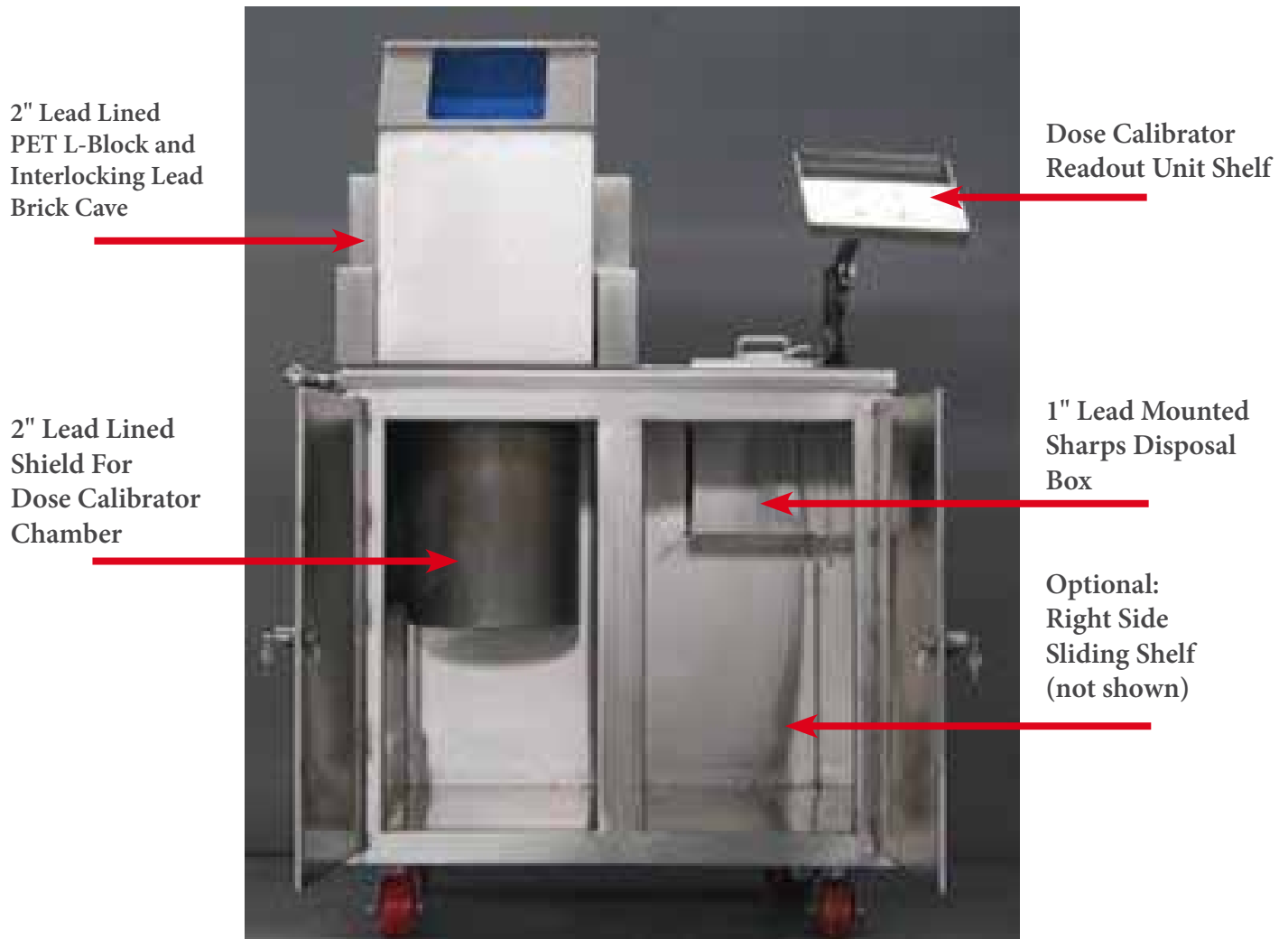
Optional Item See Page 13

PTI-DL

Dose-Lift Dose Calibrator Syringe/Vial Transfer System
Includes: Lifting mechanism and air compressor.

Call Pinestar toll-free 1-800-682-2226, to place an order

PETSSC
PET Stainless Steel Cabinet, 1/4" lead



Dose Calibrator Not Included

PET Stainless Steel Cabinet

Dimensions: 40" W x 27" D x 36" H

Overall width of the unit is 44" with the handles

Total Height from top of L-block to floor: 54"

Shipping Weight: 2640 lbs

PET L-Block with "C" shaped bite cut out, 2" lead with 8" x 8" x 4" glass

**Unit comes fully assembled as shown. It ships Motor Freight and rolls off the pallet.
Dose Calibrator can be set up behind the L-Block and the unit is ready to use.**

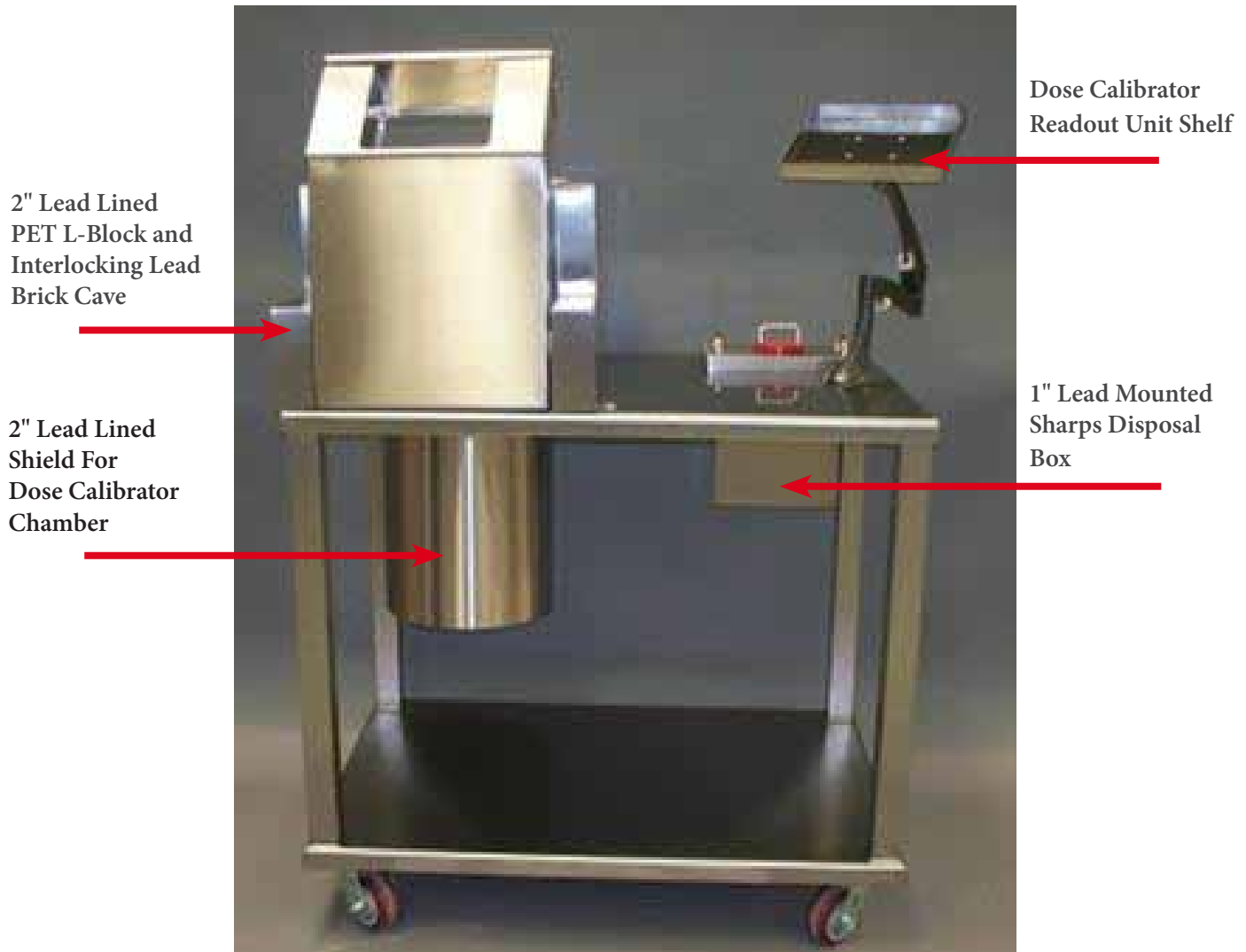
Call for Pricing

Optional Item See Page 13

PTI-DL

**Dose-Lift Dose Calibrator Syringe/Vial Transfer System
Includes: Lifting mechanism and air compressor.**

PETSST PET Stainless Steel Table



Dose Calibrator Not Included

PET Stainless Steel Table

Dimensions: 40" W x 27" D x 36" H

Overall width of the Table is 44" with the handles

Total Height from top of L-block to floor: 54"

Shipping Weight: 2100 lb

PET L-Block with "C" shaped bite cut out, 2" lead with 8" x 8" x 4" glass

Unit comes fully assembled as shown. It ships Motor Freight and rolls off the pallet.

Dose Calibrator can be set up behind the L-Block and the unit is ready to use.

Call for Pricing

Optional Item See Page 13

PTI-DL

Dose-Lift Dose Calibrator Syringe/Vial Transfer System

Includes: Lifting mechanism and air compressor.

Call Pinestar toll-free 1-800-682-2226, to place an order

Lead Lined PET Unit Dose Cabinet / Table



- Designed for PET hot labs with limited space
- Accommodates:
 - Compact L-Block Shield with Built-in Dose Calibrator Shield
 - PET Sharps Container Shield
 - Lead Brick Cave (244-205)
 - Atomlab Dose Calibrators and most others
- Sliding shelves for:
 - PET shipping containers
 - Small items
- Lead shielded on all six sides
- Key-locked doors



- Designed for PET hot labs with limited space
- Lead shielding under calibration chamber
- Ships Completely Assembled:
 - Compact L-Block Shield with Built-in Dose Calibrator Shield
 - PET Sharps Container Shield
- Shelf space for:
 - PET shipping containers
 - Small items

Upon request, the manufacturer will factory mount the L-Block and Sharps Shield in place, eliminating the need for on-site lifting equipment. A simple pallet jack is all that is required to move the unit.

Ships completely assembled, the Unit Dose Table eliminates the need for on-site lifting equipment. A simple pallet jack is all that is required to move the unit.

Specifications:

Dimensions: 36.5" W x 24" D x 36.5" H
 Lead Shielding: 1/4" thick
 Finish: Powder coat
 Doors: Key-locked
 Countertop: Stainless steel with 4" backsplash and 1/2" spillproof lip
 Weight Capacity: 1550 lb
 Weight: 1240 lb

Specifications:

042-448 PET Unit Dose Table:
 Dimensions: 36.75" W x 24" D x 36" H
 Front legs incorporate adjustable levelers
 Lead Shielding: 1" thick (enclosed in chamber mounting shelf)
 Finish: Powder coat
 Weight Capacity: 1550 lb
 Weight: 294 lb

042-433 Compact L-Block with Dose Calibrator Shield:

Dimensions: 18" W x 21.5" D x 26" H
 Lead Shielding: Front: 1.5" thick
 Base: 1" thick
 Calibrator Shield: 1" thick
 Calibrator Shield: I.D.: 6.85" I.D. x 10.25" H
 Lead Glass Window:
 Dimensions: 8" W x 8" H x 4" thick
 Density: 5.2 g/cm³
 Finish: Powder coat
 Weight: 590 lb
 Detailed Specifications on page 83

039-412 High-Energy PET Sharps Container Shield:

Dimensions: 12" H x 8.75" Dia
 Lead Shielding: Sides and Bottom: 1" thick
 Rotating Cover: .875" thick
 Hinged Door: .625" thick
 Security: Key-locked
 Weight: 175 lb
 Shipping Weight: 222 lb
 Detailed Specifications on page 88

- 244-200** PET Unit Dose Cabinet, 1/4" lead
Does not accommodate lead brick cave
244-205 PET Unit Dose Cabinet, 1/4" lead
Accommodates lead brick cave 042-434

*Note: Cabinet is also available with 1/2" and 1" lead shielding
 Call for pricing.*

Standard Configuration:

- 042-433** Compact L-Block Shield, 1.5" lead
 With built-in Dose Calibrator Shield
042-434 3-wall Lead Brick Cave, 2" lead
 Fits: 042-433 L-Block Shield
086-332 Atomlab™ 500Plus Dose Calibrator,
 100-240 VAC
 Includes: Smart Display, ionization chamber,
 well counter, RS-232 port, vial/syringe dipper
 and well insert
039-412 PET Sharps Container Shield, 1" lead
 Uses one NMC-416 Sharps Container
NMC-416 3.2 quart Sharps Container, 12/pkg

- 042-448** PET Unit Dose Table
 Includes: 042-433 Compact L-Block with
 Dose Calibrator Shield and 039-412
 Sharps Container Shield
042-434 3-wall Lead Brick Cave, 2" lead
 Fits: 042-433 L-Block Shield
042-435 Lead Brick Cave Cover
086-332 Atomlab™ 500Plus Dose Calibrator
 100-240 VAC
 Includes: Smart Display, ionization chamber,
 well counter, RS-232 port, vial/syringe dipper
 and well insert
NMC-416 3.2 quart Sharps Container, 12/pkg



Designed specifically for the PET Unit Dose Cabinet and PET Unit Dose Table on page 82

- Designed for managing large quantities of high-energy radionuclides
- 2.4" lead shielding encased in steel, in front and base
- 8" x 8" x 4" easily adjustable lead glass window
- Convenient lever allows quick adjustment of window
- Special plate with hex-shaped recess mounted on base to facilitate one-handed loading and unloading of dose pigs with hex-shaped bottoms
- Optional Lead Brick Cave 042-017 for complete lateral shielding

- Designed to maximize space in facilities receiving and preparing doses of high-energy nuclides such as FDG F-18
- Built-in calibration chamber shield is designed to accommodate a chamber the customer has through-mounted in a countertop
- This combination of L-Block and Dose Calibrator Shield eliminates the need to purchase interlocking shielding rings
- 1.5" thick lead shielding in front, encased in steel
- 1" lead thickness in base and in chamber shield
- 8" x 8" x 4" adjustable lead glass window
- Special plate with a hex-shaped recess is mounted on the L-Block base to facilitate one-handed loading and unloading of dose pigs with hex-shaped bottoms
- Optional Lead Brick Cave 042-434 for complete lateral shielding

Specifications:

042-413 PET Deluxe L-Block Shield

Dimensions: 20" W x 17.88" D x 28.75" H
 Lead Shielding: 2.4" thick
 Lead Glass Window: Dimensions: 8" W x 8" H x 4" thick
 Density: 5.2 g/cm³
 Finish: Powder coat
 Weight: 550 lb
 Shipping Weight: 702 lb

042-417 Interlocking Lead Brick Cave:

Dimensions: I.D.: 15.3" W x 13.6" D x 16" H
 Lead Shielding: 2.4" thick
 Finish: Paint
 Weight: 611 lb

042-407 Steel Table:

Dimensions: 36.75" W x 24" D x 36" H
 Shipping Weight: 195 lb

042-413 Deluxe L-Block Shield, 2.4" lead

042-417 3-wall Lead Brick Cave 2.4" lead
 Fits 042-413 L-Block Shield

042-407 Steel Table

Specifications:

042-433 Compact PET L-Block with Dose Calibrator Shield

Dimensions: 18" W x 21.5" D x 26" H
 Lead Shielding: Front: 1.5" thick
 Base: 1" thick
 Calibrator Shield: 1" thick
 Calibrator Shield I.D.: 6.85" I.D. x 10.25" H
 Lead Glass Window: Dimensions: 8" W x 8" H x 4" thick
 Density: 5.2 g/cm³
 Finish: Powder coat
 Weight: 570 lb
 Shipping Weight: 590 lb

042-434 Interlocking Lead Brick Cave:

Dimensions: I.D.: 14" W x 20.5" D x 16" H
 Lead Shielding: 2" thick
 Finish: Paint
 Weight: 597 lb

042-433 Compact PET L-Block with Built in Dose Calibrator Shield, 1.5" lead

042-434 3-wall Lead Brick Cave 2" lead
 Fits 042-433 L-Block Shield

042-435 Lead Brick Cave Cover for 042-434

PET L-Block

Interlocking Lead Brick Cave



Stainless Steel covered PET L-Block Dimensions:

L-Block with 8" x 8" x 4" lead glass: 14" W x 16 1/4" D x 20 1/2" H

Choice of Lead Thickness:

2" in Front and 2" in Base or
1.5" in Front and 1" in Base

Interlocking Lead Brick Cave Dimensions:

19 1/4" W x 18 1/2" D x 13" H

Installs easily, assembly instructions provided

LBM-101	PET L-Block	2" lead front	2" lead base	8" x 8" x 4" lead glass	Weight 400 lb
LBM-160	PET L-Block	1.5" lead front	1" lead base	8" x 8" x 4" lead glass	Weight 290 lb
INLB-100	Interlocking Lead Brick Cave for above L-Blocks with 3-Piece Stainless Steel cover, 2" Lead				Weight 550 lb

PET L-Block with "Bite" Cut Out



- Special L-Block, designed for PET facilities with limited space that want the Dose Calibrator behind the L-Block.
- Dose Calibrator Chamber can be placed on the countertop or recessed into the cabinet
- Modular design makes it easy to assemble at the facility
- 2" lead shielded front and base
- Optically pure 8" x 8" x 4" lead glass, density of 5.2 g/cm³
- Bite Cut out is 12" wide and 6" deep

This L-Block can be custom made to fit your specific size

Specifications:

Dimensions:	14" W x 20 1/2" H x 16" D, with cut out for Dose Calibrator
Overall Height:	23.5"
Shielding:	2" lead in front and base
Lead Glass:	8" x 8" x 4" optically pure, 5.2 g/cm ³ density
Finish:	Stainless Steel
Weight:	325 lb



PET-BTO
INLB-PETBTO

PET L-Block with Bite Cut Out
Interlocking Lead Brick Cave for PET-BTO, 2"Lead
Specifications are subject to change

Adjustable PET L-Block Interlocking Lead Brick Cave



Fully Adjustable Stainless Steel Covered PET L-Block

- Available in 3 lead thicknesses: 1.5", 2", or 2.5"
- Lead on the front and the bottom
- 8" x 8" x 4" lead glass
- Adjustable angles: 0°, 22.5°, 45°, 67.5° and 90°
- 14" Wide x 16 1/4" Deep
- Height fully extended: 22.75"
- Height at 45° angle: 21 3/4"



PET-ALB1.5	Adj. PET L-Block	1.5" lead front & base	8" x 8" x 4" lead glass	Wt 300 lb
PET-ALB2	Adj. PET L-Block	2" lead front & base	8" x 8" x 4" lead glass	Wt 400 lb
PET-ALB2.5	Adj. PET L-Block	2.5" lead front & base	8" x 8" x 4" lead glass	Wt 500 lb

INLB-100	Interlocking Lead Brick Cave for above L-Blocks with 3-Piece Stainless Steel cover, 2" Lead			Wt 550 lb
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PET Mobile Radiation Shield



- Designed specifically for PET
- Four 5" swivel casters, two are lockable
- **2" thick lead-shielding**
- 8" x 8" x 4" thick lead glass viewing window
- Constructed of Stainless Steel

Dimensions:

Total Height: 56"
Total Width: 17 1/2"
Total Depth: 27 1/2"
Weight: 700 lb



PET Bullet Syringe Shields



- Simply insert syringe and twist, it locks in place
- Available with or without High Density Lead Glass Window
- No Screws
- No Springs
- For BD Syringes only
- 9.0 mm tungsten
- Small anti-roll nodules keep them from rolling off the countertop



Without Lead Glass Window

BUPET3 PET Bullet Syringe Shield, 3 cc without glass
BUPET5 PET Bullet Syringe Shield, 5 cc without glass

With Lead High Density Lead Glass Window

BUPET3-G PET Bullet Syringe Shield, 3 cc
BUPET5-G PET Bullet Syringe Shield, 5 cc

Replacement Glass

SSB-GLASS-1 Replacement Glass, 3 cc or 5 cc

Pro-Tec® PET Syringe Shields



- Constructed of .34" thick (9 mm) tungsten, attenuates FDG F-18 by 88%
- Available with or without a high density (5.6) flush mounted lead glass window
- Fits most disposable syringes
- A thumbscrew holds the syringes firmly in place

With Lead Glass Window

007-973 Pro-Tec PET Syringe Shield, 3 cc
007-975 Pro-Tec PET Syringe Shield, 5 cc
007-980 Pro-Tec PET Syringe Shield, 10 cc

Replacement Glass

007-974 Pro-Tec PET Replacement Glass

Without Lead Glass Window

PTI-973 Syringe Shield, 3 cc without glass
PTI-975 Syringe Shield, 5 cc without glass
PTI-980 Syringe Shield, 10 cc without glass



Z-PET Syringe Shield



- Constructed of .55 thick (14 mm) tungsten, attenuates FDG F-18 by 97%
- Accommodates standard 5 cc syringes
- 2.75" L x 1.7" dia
- Weight: 3.7 lb
- Easily sanitized with alcohol wipes

007-945 Z-PET Syringe Shield, 5 cc



Color Coded Syringe Labels on page 136

Gaard Lock™ PET Syringe Shields

- Unique flange locking design reduces exposure with faster handling
- Constructed of .34" thick (9 mm) tungsten, attenuates FDG F-18 by 88%
- Available with or without a high density (5.6) flush mounted lead glass window
- Twist to lock syringe in place with one hand

With Lead Glass Window

- 007-716 Gaard Lock PET Syringe Shield, 3 cc
 007-717 Gaard Lock PET Syringe Shield, 5 cc
 007-718 Gaard Lock PET Syringe Shield, 10 cc

Replacement Glass

- 007-974 Gaard Lock PET Replacement Glass

Without Lead Glass Window

- PTI-711 Syringe Shield, 3 cc without glass
 PTI-712 Syringe Shield, 5 cc without glass
 PTI-713 Syringe Shield, 10 cc without glass



MRI Compatible Syringe Shield for PET

MRI Compatible Syringe Shield for PET with Nylon Screw

- 3ml shield 1.22" outer Ø x 0.51" ø x 2.67" long
- 5 ml shield 1.33" outer Ø x 0.62" ø x 2.52 long
- 10 ml shield 1.45" outer Ø x 0.74" ø x 3.34" long
- 9 mm Tungsten

The material has been certified as MRI-compatible

- 3-MRI/P 3 cc MRI Compatible Syringe Shield for PET
 5-MRI/P 5 cc MRI Compatible Syringe Shield for PET
 10-MRI/P 10 cc MRI Compatible Syringe Shield for PET

- MRI-000 Replacement Screws for the above Syringe Shields



Lead-lined Syringe Carriers for PET

Specifications:

- 001-180 I.D. 7.7" L x 2.6" W x 2.7" H O.D. 9.5" L x 4.4" W x 3.5" H
 Lead Shielding: Sides, top, bottom .25" thick, Ends: .5" thick
 Weight: 17 lb
- 001-182 I.D. 7.5" L x 1.7" W x 1.7" H O.D. 9.25" L x 3.4" W x 2.6" H
 Lead Shielding: Sides, top, bottom .25" thick, Ends: .5" thick
 Weight: 11 lb

Shielded Syringe Carrier, .25" Lead

- 001-180 Syringe Carrier, Large, Weight 17 lb
 001-182 Syringe Carrier, Small, Weight 11 lb



PET Container Shield

Safe and convenient solution for the disposal of syringes that have been contaminated with high energy radionuclides

- Stainless Steel lined with lead
- 1" lead
- Lockable hinge
- 3" drop hole with lead cover

Dimensions: 10 1/2" W x 6 1/2" D x 13" H with lid

Weight: 195 lb



610-1PH
610R

1" lead PET Container Shield
Red Plastic Container, 8 1/2" L x 4" D x 9" H

Qty 1-10
Qty 11-15
Qty 16-31
Qty 32



High-Energy PET Sharps Container Shield

Simple, safe and convenient solution for the disposal of syringes that have been contaminated with high-energy radionuclides

- Constructed of steel and lined with 1" thick lead
- Lockable sliding cover for container removal
- Hinged top door for syringe disposal
- Can stand independently or be recessed into a cabinet or countertop

Dimensions: 12" H x 8.75" Dia

Lead Shielding:

Sides and Bottom: 1" thick
Rotating Cover: .875" thick
Hinged Door: .625" thick

Security: Key-locked

Weight: 175 lb

Shipping Weight: 222 lb

039-412

High Energy PET Sharps Container Shield, 1" lead

NMC-416

3.2 quart Sharps Container, 12/pkg

039-413

3.2 quart Sharps Container, 30/pkg



Rectangular Lead Container

Designed for storage and shipment of radioactive materials

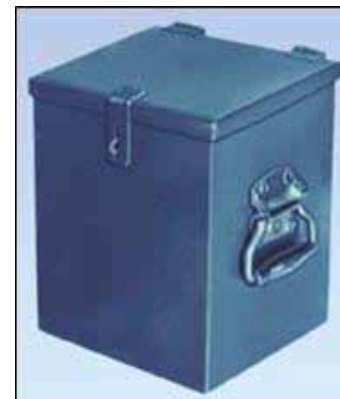
- 1" lead shielding offers adequate protection for most radioisotopes
- Hinged cover can be locked with a padlock (not included)

Dimensions: I.D.: 6" L x 6" W x 8" H
O.D.: 8" L x 8" W x 11" H

Lead Shielding: 1" thick

Weight: 175 lb

Shipping Weight: 180 lb



001-001

Rectangular Container, 1" lead

PET Unit Dose Pig Compact PET Shipping Systems

- The PET Unit Dose Pig 3/5 cc, is encapsulated in high-impact Lexan and polypropylene making it durable, easy to clean and compatible with automatic washing systems
- 3 Compact PET Shipping Systems to choose from; Single, Double or Triple
- Transport 3cc or 5cc syringe(s) containing high-energy radionuclides such as FDG F-18
- Syringes with or without attached needles fit in the Pig
- Designed to conserve space and minimize weight
- Meets IATA Dangerous Goods Regulations, 56th Edition Sections 5.0.4.3, 10.5, and 10.6.1 thru 10.6.3.5



001-785 PET Unit Dose Pig
Dimensions: 10.2" H x 2.4" Dia
Lead Shielding:
Body: .5" thick
Ends: 1.2" thick, bottom
1.44" thick top
Weight: 8.7 lb

Note: PET Pig Rack on page 34



001-786
PET Single Shipping System
Container Dimension:
11.75" L x 11.75" W x 12.5" H
Cubic Feet: ~ 1 cu ft
Weight (Combined): 38.3 lb
Single System meets DOT Yellow II Type A packaging requirements when shipping up to 500 mCi (18.5 GBq) of FDG F-18



001-787
PET Double Shipping System
Container Dimension:
11.75" L x 11.75" W x 12.5" H
Cubic Feet: ~ 1 cu ft
Weight (Combined): 55.2 lb
Double System meets DOT Yellow II Type A packaging requirements when shipping up to 160 mCi (5.92 GBq) in one pig and 235 mCi (8.70 GBq) in the other, totalling 395 mCi (14.62 GBq) of FDG F-18



001-739
PET Triple Shipping System
Container Dimension:
11.75" L x 11.75" W x 12.5" H
Cubic Feet: ~ 1 cu ft
Weight (Combined): 95 lb
Triple System meets DOT Yellow II Type A packaging requirements when shipping up to 235 mCi (8.70 GBq) in one pig and 160 mCi (5.92 GBq) in the second pig and 140 mCi (5.18 GBq) in the third pig, totalling 535 mCi (19.80 GBq) of FDG F-18

- | | |
|----------------|---|
| 001-785 | PET Pig Unit Dose, 3/5 cc, 1/2" lead
Note: sold in lots of 3
Accommodates syringes with or without needle |
| 001-786 | PET Single Shipping System
Includes: One 001-785 Unit Dose Pig, absorbent sheets and shipping container with lead shielding |
| 001-787 | PET Double Shipping System
Includes: Two 001-785 Unit Dose Pigs, absorbent sheets and shipping container with lead shielding |
| 001-739 | PET Triple Shipping System
Includes: Three 001-785 Unit Dose Pigs, absorbent sheets and shipping container with lead shielding |
| 001-730 | PET Shipping System Transport Cart |
| 001-771 | Absorbent Sheets, 100/pkg |
| 001-726 | Wire Security Tags, 25/pkg
Used to identify unauthorized access |
| 001-721 | Document Protector |

Call Pinestar toll-free 1-800-682-2226, to place an order

PET Vial Pig

Vials containing PET or other high-energy radionuclides can be safely transported in this 10/30ml Vial Pig. The pig offers a minimum of 1" of lead shielding to accommodate the concentrated energy. Can be used independently or with the PET Shipping System 001-724



- Dimensions: Exterior: 6.63" H x 4.15" Dia Interior: 2.76" H x 1.151" Dia
- Lead Shielding: Sides & Bottom: 1" thick Top: 1.75"
- Weight: 21.3 lb

001-706 **PET Vial Pig, 10/30 ml, 1" lead**
For: 30 ml vials
Includes: 001-707 Vial Pig Adapter,
to accommodate 10 ml vials and three Absorbent Sheets

001-771 **Pig Absorbent Sheets, 100/pkg**
001-707 **Vial Pig Adapter**

Compact PET Shipping System for Vial Pig



- The PET Shipping System for Vial Pigs is designed to transport a 10 ml or 30 ml vial containing high-energy radionuclides
- Designed to conserve space and minimize weight, the entire system weighs only 50 lb
- An important feature is that the shipping container can be placed at a convenient height while the pig is easily removed from the shipping case
- **The system meets DOT Yellow II Type A packing requirements when shipping up to 1.5 Ci (92.5 GBq) of FDG F-18**
- **Meets IATA Dangerous Goods Regulations, 56th Edition Sections 5.0.4.3, 10.5, and 10.6.1 thru 10.6.3.5**



001-724 **PET Shipping System, Vial Pig**
For 10 or 30 ml vials
Includes: 001-706 Vial Pig and Shipping Container
with lead shielding

001-730 **Transport Cart, PET Shipping Systems**
001-726 **Wire Security Tags, 25/pkg**
Used to identify unauthorized access
001-771 **Absorbent Sheets, 100/pkg**

PET Vial Shield With Handle



Shielding: **25mm Tungsten**

Container Height: 3.6" (Bottom: 3" Lid: .6")
Outer Diameter: 2.6"
Inner Dimensions: 1" Diameter x 2.2" H
Weight: 13.2 lb

PVH **PET Vial Shield With Handle**

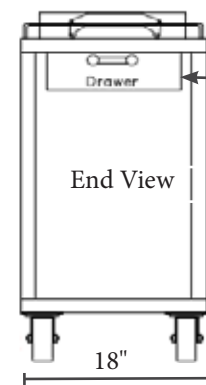
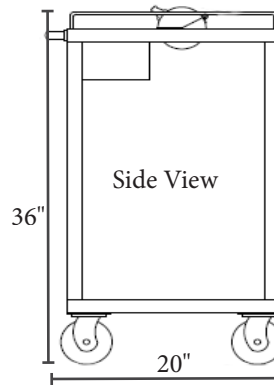
PPG-PET Pig Transport Cart- Clamshell



**Transport a dose
in a syringe shield**

**Stainless Steel Cart
with Handle**

Weight: 225 lb
Clam Shell Inside Dims:
2 7/8" x 10 15/16"
Clam Shell Cover, 1.5"
lead, to transport doses in
syringe shields



Non Leaded
Drawer

PPG

PET Pig Transport Cart, Clamshell

PPG-15 PET Pig Transport Cart- Vertical

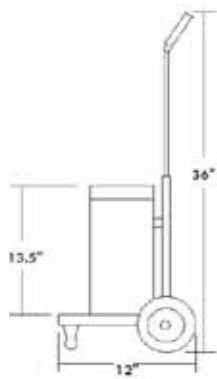
Vertical Container Opening: 4" Inside Diameter
Vertical Container Height: 8 1/8" Outside Diameter
7" Inside Diameter
Shielding: 1" lead
Total Height: 38" to top of clamshell
Length: 30"
Width: 15 1/16"
Weight: 350 lb



PPG-15

PET Pig Transport Cart, Vertical

Model 154 Pig Transport Dolly



Container Opening: 4" Diameter
Container Height: 13 1/2"
Shielding: 1/2" lead
Total Height: 36"
Depth: 12"
Width: 15 1/16"
Weight: 100 lb



Model 154 Pig Transport Dolly

Call Pinestar toll-free 1-800-682-2226, to place an order

Stainless Steel Transport Carts



PTI-HDTC Heavy Duty Transport Cart

Heavy Duty Transport Cart

Dimensions: 20" W x 30" L x 36" H
Constructed of 1/8" Stainless Steel
2 fixed & 2 swivel locking casters
Lockable push handle
3 fixed shelves
Weight: 150 lbs
Weight capacity 400 lb per shelf
Shipping weight on a pallet: 185 lbs



PTI-TC Stainless Steel Transport Cart

Stainless Steel Transport Cart

Dimensions: 18" W x 27" D x 31.5" H
2 fixed & 2 swivel locking 4" casters
Weight: 120 lbs
Weight capacity 1000 lbs
Ideal for transporting heavy L-blocks and caves
Shipping weight on a pallet: 155 lbs



041-311 Standard Stainless Steel Lab Cart

Standard Stainless Steel Lab Cart

Dimensions 24" W x 16" D x 30" H
Weight Capacity: 300 lb
Shipping Weight: 38 lb, ships mostly assembled
in an oversized box

Thyroid/Parathyroid Imaging Support



- Provides optimal exposure of the neck
- Comfortable head rest
- **Chin is tilted back for parathyroid and thyroid imaging**
- Flat base will contour to fit most imaging tables
- Constructed of molded foam
- Seamless bacteriostatic coated surface is tough and fluid proof
- Wipes clean with standard germicidals
- Meets CAL 117 flammability standards



Dimensions: 14.5" W x 17.5" D x 4.5" H

NMC-601U Thyroid/Parathyroid Imaging Support

Adjustable Neck/Head Support System



- Technologist inspired to provide support of the head and shoulders while facilitating extension and exposure of the anterior neck
- **Uniquely shaped base creates cervical extension while the adjustable/removable head holder provides lateral head support minimizing rotational/translational motion**
- Easy to separate, the base and head support can be used independently
- Blue covering is fluid proof with a bacteriostatic additive, wipes clean with standard germicidals
- Meets Joint Commission and Flame Retardant Standards (CAL177)

Ideal For Supine Imaging
Thyroid Salivary
Parathyroid Lymph Nodes

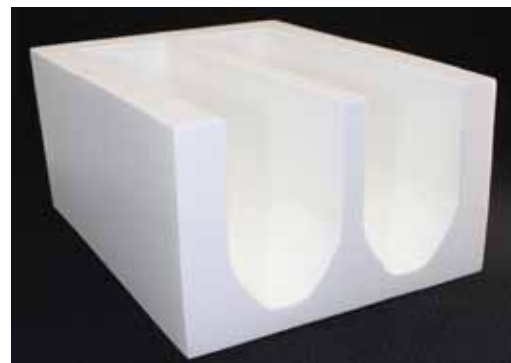


Total Dimensions: 14.25" W x 21" D x 9.5" H

PTI-STP Adjustable Neck/Head Support System

Ankle/Feet/Leg Immobilizer

- Technologist inspired to provide support of the lower extremities, feet and ankles during medical imaging
- **Ideal for SPECT/CT of the feet and ankles, bone scans, white blood cell imaging**
- Closed end design facilitates fixed 90 degree positioning of the feet which minimizes motion and provides for repeatability of positioning
- Integrated divider wall separates extremities while providing lateral support
- Meets Joint Commission and Flame Retardant Standards (CAL177)



Dimensions: 14" W x 18" D x 10" H

PTI-401-AFL Ankle/Feet/Leg Immobilizer

Arm Support II



- Comfortably supports a patient's arms during various diagnostic and therapeutic medical procedures.
- Easily Cleaned
- Velcro Mounting
- Safety Designed
- Use in Nuclear, MRI, CT, Cath Lab, Interventional Radiology
- Ivory coating

Dimensions: 20" W x 18" D x 9" H, flat base

NMC-700 Arm Support II, Ivory

Includes two disposable pillows with cases

Arm Support II- Narrow



- Suited for PET applications or imaging systems that demand narrow supports
- A smaller version of our NMC-700 Arm Support II
- Hand strap included for patient comfort
- Black coating

Dimensions: 18.5" W x 15" D x 8" H, flat base

NMC-800 Arm Support II- Narrow, Black

Includes two disposable pillows with cases

Arm Support III



- Ideal for PET and narrow closed gantry imaging systems
- Created to prevent arm and shoulder pain during supine medical imaging and treatments that mandate prolonged arm hyperextension and abduction (or elevation)
- Provides total arm support and passive restraining
- Designed to fit today's more narrow and streamlined imaging systems
- Unique closed head support aids in the prevention of long hair entanglement in any imaging system components
- Fits virtually all patients
- Beige coating

Dimensions: 16.5" W x 22" D x 10" H

NMC-401U Arm Support III, Beige

Includes two disposable pillows with cases

Patient Arm Support 5



- Designed to fully support a patient's arms, head and shoulders
- Utilizes a patented, ergonomically correct design, it allows each individual patient to position themselves on the supporting surface, while settling into a final position of comfort and compliance on the imaging surface
- Royal Blue with built-in Velcro hand straps. Removable head cushion

Dimensions: 17" W x 12" D x 7" H, flat base

NMC-5 Patient Arm Support 5

Patient Arm Support

- Recommended for Single Head Imaging Systems
- Technician designed, patient tested
- Comfortably supports a patient's arms during various diagnostic and therapeutic medical procedures
- Engineered with maximum flexibility to fit most imaging tables
- Improves productivity
- Increases technician efficiency
- Two disposable pillows, two mounting straps and one hand held strap are included

Dimensions: 21" W x 13" D x 9" H

NMC-201U Patient Arm Support



Patient Arm Holder

- Created to prevent arm & shoulder pain during supine medical imaging and treatments
- Provides total arm support and passive restraining
- Fits virtually all patients
- Royal Blue Antimicrobial fabric cover

Dimensions: 19" W x 17" D x 9.5" H

NMC-501U Patient Arm Holder

Includes two disposable pillows with cases



Disposable Patient Pillows & Cases

- Soft, comfortable disposable patient pillows suitable for daily hospital, clinic and patient positioning applications
- Contain Trevira® polyester for superior quality and comfort
- Used daily at hundreds of clinics and hospitals they provide comfortable positioning at reasonable prices
- Meet federal flammability standards

Dimensions: Pillows: 11" x 15"
Cases: 12" x 16"



NMC-PIL Disposable Patient Pillows, 20/case

NMC-CASE Disposable Pillow Cases, 20/case

DAT Imaging Head Support



The DAT-HH Imaging Head Support was created to address the need for a high quality, versatile, generic support product for use during head/ brain nuclear imaging studies on systems that were not originally supplied with a head support.

Compatible with:

- Imaging systems that have contoured, cantilevered imaging surfaces.

Provides:

- Stable head positioning and close positioning of imaging detectors.
- An acquisition radius not possible with many other head holders. While 14-15 cm radiuses are common with other head holders, acquisition radiuses near 12 cm have been achieved with the Imaging Head Support during clinical certification studies (pic 3).
- Reduced distance and attenuation.
- Helps to facilitate higher quality.

Durable:

- Constructed of high strength carbon fiber, the Imaging Head Rest is strong, durable and will provide years of service.

Included Accessories:

- One set of chin/cup - forehead straps
- One head height pad
- Two table surface wedges
- Three peel and stick hook/look surface mounting strips
- Carry/storage bag

Care-Cleaning: Spray and wipe clean with any water based medical grade germicidal.



*Pic 3
Nuclear Certification Study
with head/brain phantom*

DAT-HH Imaging Head Support

Black High Quality clear Carbon Fiber Finish

Dimensions: 29.5" L x 12" W x 3.5" H

Patent Pending

Imaging Body Wrap

If your body wrap looks like this...
Call Pinestar for a fast easy replacement

Do you have a Siemens brand Imaging System with a worn out patient restraint body wrap?
Look no further, a replacement wrap set is now available.

- Compatible with Siemens Brand Body Imaging Tables already fitted with a body wrap, or equipped with hook style fasteners on the table surface (under the table pad)
- Provides direct replacement of original patient restrain/ body wrap set
- Totally wraps around patient and secures upper extremities, stable, comfortable positioning
- Constructed of bacterial & fluid resistant durable 200 denier nylon Navy Blue fabric.
- How to use: Remove old straps, secure new straps to table surface via the integrated loop style fasteners, position patient and wrap one strap over the other and secure the closure with integrated hook and loop closures, carefully monitor patient during use
- Care-Cleaning: Spray & wipe clean with any water based medical grade germicidal. Can be machine laundered.

NMC-2434-BLUE Imaging Body Wrap

*Includes one set of two 24" W x 34" L straps
with integrated hook and loop fasteners, Navy Blue color*



**Set of 24"W x 34"L Straps
Fasten to Imaging Table**

Arm Support Strap

- Designed to reduce patient fatigue by immobilizing and supporting the arms at the patient's side
- Constructed of comfortable cotton with Velcro brand hook and loop fasteners that wrap around both the table and the patient
- No attenuation to the image
- Yellow color makes it easy to identify and find within the department

Dimensions: 71" L x 8.5" W

056-786 Arm Support Strap



Multi-purpose Support Straps

- Universal application straps; useful for arm support, breast compression and general patient restraint
- Unique design allows the strap to fasten all the way around the imaging table, patient or both simultaneously
- Velcro brand closures allow for fast, easy attachment of the strap onto itself
- Constructed of Black 200 Denier Rip-Stop Nylon Material
- Meets UL 94 Flammability Standards
- Bacteriostatic and Washable



NMC-265	2" x 60"
NMC-560	5" x 60"
NMC-872	8" X 72"
NMC-1560	15" x 60"
NMC-2560	25" x 60"
NMC-1272	12" x 72"
NMC-2072	20" x 72"
NMC-2096	20" x 96"

AliStrap

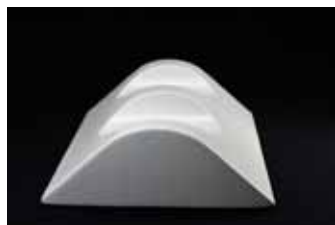
- The answer to all your strapping needs
- One indispensable material with countless uses, seals to itself

NMC-4485	Alistrap- Narrow, 3/4" x 30'
NMC-4486	Alistrap 1 1/2" x 30'
NMC-4487	Alistrap- Wide, 3" x 30'
NMC-4488	Alistrap- X-Wide, 5" x 30'
NMC-9955	Radiolucent Immobilizer, 75" L x 14" W



Call Pinestar toll-free 1-800-682-2226, to place an order

Contoured Leg Rests



NMC-71718

- 3 heights allow for positioning of patients of various heights
- Created to prevent the cycle of low back stress and pain that commonly occur during spine imaging and treatment
- Unique recesses create additional lateral support, thereby minimizing both rotational and translational body motion
- Ideal for any prolonged supine imaging study
- Ivory vinyl coating (NMC-71718 has Black vinyl coating)

NMC-805 5" H x 14.5" D x 18" W, Ivory
Ideal for Patients 5 ft tall and under

NMC-807 7" H x 17" D x 13" W, Ivory
Ideal for Patients 5 ft to 6 ft tall

NMC-810 10" H x 24" D x 18" W, Ivory
Ideal for Patients 6 ft and taller

NMC-811 Set of 3 sizes
1 each of NMC-805, NMC-807, NMC-810

NMC-71718 7" H x 17" D x 18" W, Black
Ideal for Patients 5 ft to 6 ft tall

Care-Cleaning: Spray & wipe clean with any water based medical grade germicidal



Comfort Leg Rest (Dark Blue)
CLR-807



Contour Leg Rest 7"
NMC-807



Tapered Leg Rest (Royal Blue)
TAP-807

Package Special

Be prepared for all your
patient positioning needs

Order today, item# LEGREST SET

- Comfortable Patient Support
- Fits all patients
- Tough & Durable
- Reduces Motion Artifact
- Reduces Back Pain
- Technologist Inspired
- Easy to clean
- Anatomically Correct

Comfort Leg Rests

- 3 heights allow for positioning of patients of various heights
- 20" wide leg rest designed to deliver total support under the knees
- Integrated handle makes it easy to carry from place to place
- Antimicrobial fabric cover, Dark Blue

CLR-805 5" H x 14" D x 20" W
Ideal for Patients 5 ft tall and under

CLR-807 7" H x 16" D x 20" W
Ideal for Patients 5 ft to 6 ft tall

CLR-810 10" H x 23" D x 20" W
Ideal for Patients 6 ft and taller



Tapered Leg Rest

- Provides comfortable and complete support for patients lower extremities during supine procedures
- Consists of an anatomically correct, open cell foam support device covered in a medical grade fabric with an integrated carry handle
- Royal Blue Antimicrobial fabric cover with Black carry handle

TAP-807 7" H x 24" D x 18" W
Ideal for Patients 5 ft to 6 ft tall



Care-Cleaning: Spray & wipe clean with any water based medical grade germicidal

Patients can order Leg Rests directly from Pinestar



Comfort Leg Rest (Dark Blue)
CLR-807



Contour Leg Rest 7"
NMC-807



Tapered Leg Rest (Royal blue)
TAP-807

**LEG REST SPECIAL OFFER
 PLEASE POST FOR YOUR PATIENTS**

Call Pinestar toll-free 1-800-682-2226, to place an order

Side Arm Holders



- Fits under the mattress and is held in place via patient weight
- Versatile support aid that permits comfortable "at the side" arm positioning
- A proven addition to narrow imaging tables
- Will benefit stroke and other difficult to accommodate patients
- Universal design is compatible with most imaging tables
- Resilient Lexan construction
- Available in Clear or Smoke color

Patient Platform area: 18" long, 3" tall support edge
Overall Dimensions: 18" x 10 1/2"

NMC-3017 Side Arm Holder, Smoke color, 1 pair

5200-3563 Side Arm Holder, Clear color, 1 pair

Arm & Leg Guard



- Securely holds patients arms and legs during any long procedure
- Sold by the pair
- 3/16" clear acrylic
- For use on tables 22" or wider
- Clean with a mild detergent

PTI-7459LG Arm & Leg Guard, Large
11.5" W x 8" H x 13.5" D, Wt 12 lbs

PTI-7459XL Arm & Leg Guard, X-Large, 1 pair
29" W x 6.5" H x 13.5" D, Wt 14 lb

PTI-7459XXL Arm & Leg Guard XX-Large, 1 pair
28.5" W x 10" H x 16" D, Wt 16 lb

SPECT Arm Boards



- Designed to fit on all SPECT tables
- They are solid under the patient while lying on the table to effectively widen the surface
- The patient's arms can be held comfortably next to the body while imaging the head
- The amount of overhang on the side of the table is adjusted by sliding the arm board further under the patient or pulling them further out for a wider surface
- Built with a convenient bend in them to aid in patient comfort and positioning
- Clear Plexiglass, they ship with a removable black film to protect from scratches

Dimensions: Length: 20"
Width Tapered 13.75" to 10.75"
Thickness: 1/4" Plexiglass

056-767 SPECT Arm Boards, 1 pair

Table Pads

- Low Attenuation
- Custom Sizes available to fit any Imaging System
- Meets or Exceeds Universal Precautions Requirements
- Standard 1" or 1/2" thickness
- Meets UL 94 Flammability Standard
- OEM Quality
 - Custom table pads are made to any design specifications
 - Adaptable to a wide range of imaging and treatment table applications including SPECT
 - Soft closed cell cushioning material is covered with a tough, smooth vinyl coated finish
 - Available in 3 colors; Ivory, Beige or Black
 - Durable and easy to clean
 - If the outer surface is ever compromised, the inner pad will not absorb liquid

Contact Pinestar For Cardio-MD Table Pads

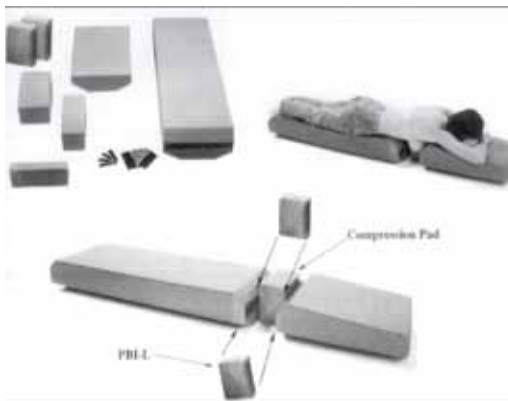


Example of
Custom Pad

2149-2710	Rectangular Table Pad, Beige, 70" x 15" x 1"
2149-2721	Rectangular Table Pad, Beige, 59" x 15" x 1"
2155-2710	Rectangular Table Pad, Ivory, 79" x 15" x 1"

NMC-300U Custom Pad, made to your specifications

Scintimammography Pad Set



Set includes:

- 1 Upper Body Support Pad: 20" L x 15" W x 7" H
- 1 Lower Body Support Pad: 46" L x 15" W x 7" H
- 2 Breast Compression Pad: 1 Small & 1 Large
- 1 Ankle Support Pad: 12" L x 4" W x 4" H
- 8 Velcro Mounting Strips

- Facilitates prone breast imaging on virtually any imaging system.
- Consists of four specialized pads which allow comfortable anatomically correct prone patient positioning
- Unique design of the pads makes right, left or bilateral breast image acquisition easy
- Compatible with flat or concave imaging tables
- Held in place with Velcro brand fasteners
- Constructed of durable seamless Ivory coated foam

PBI-3 Scintimammography Positioning Pad Set

PBI-L Separation Pad with 1 mm of lead for bilateral imaging

EasySlider™ Patient Mover

- Move your patients easily and effectively without lifting
- Designed to facilitate horizontal patient transfer from gurney to table with minimum effort
- Highly durable polypropylene plastic material is entirely radiolucent, allowing it to be left under the patient during radiography

Dimensions: 72" L x 22" W x 3/16" thick

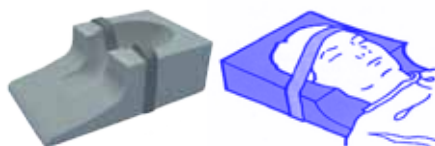
NMC-533 EasySlider Patient Mover



Skull- Head- Neck

Positioners - Immobilizers - Blocks
Specialty Applications Products

AP Head Immobilizer with Velcro restraining strap
Nuclear, MRI, CT
5" H x 9.75" W x 16" L



NMC-409NC Non-Coated

NMC-409 Scan Coated- White

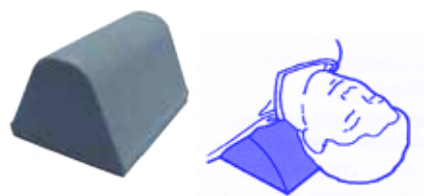
Adult Head Holder AP PA
Head Positioning
6.75" H x 11.75" W x 10" L



NMC-102NC Non-Coated

NMC-102 Scan Coated- White

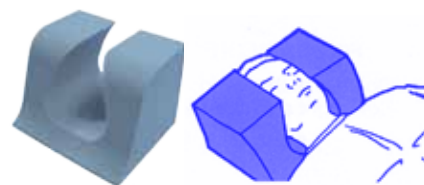
Pressure Block
Special Procedure- Skull work
5.5" H x 7.3" W x 10" L



NMC-104NC Non-Coated

NMC-104 Scan Coated- White

AP PA Adult Head Immobilizer
Head Immobilization in trauma, ER
7" H x 11" W x 9.25" L
Also available for Child and Infant, call for pricing.



PTI-408NC Non-Coated

PTI-408 Scan Coated- White

This is a listing of our more popular Positioners.

*If you do not see the Positioner you are looking for,
give us a call and we can help you find the right
product to position your patient.*

Extremity & Specialty

Positioners - Blocks

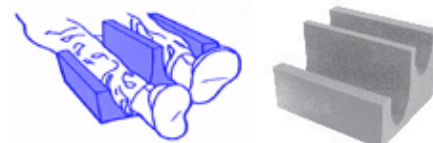
Cross-Table Lateral Leg Block

Used for comparative studies of legs

10" H x 14" W x 16" L

PTI-203NC Non-Coated

PTI-203 Scan Coated- White



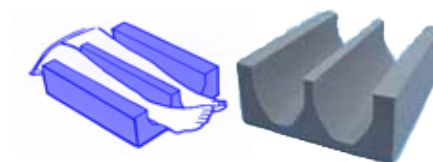
Leg Immobilizer

Positions and immobilizes lower extremities

6" H x 14" W x 16" L

PTI-401NC Non-Coated

PTI-401 Scan Coated- White



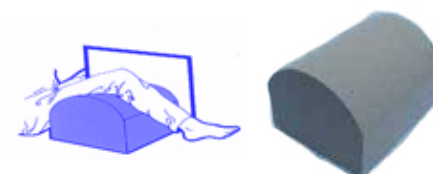
Knee Arthrography Block

Facilitates immobilization and effective knee flexion during arthrography

8" H x 12" W x 10" L

PTI-209NC Non-Coated

PTI-209 Scan Coated- White



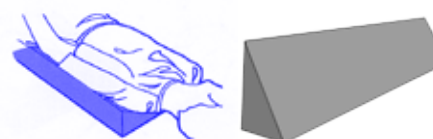
Spinal Wedge 45°

Oblique spine support

7" H x 7" W x 21" L

NMC-145NC Non-Coated

NMC-145 Scan Coated- White



Spinal Wedge 45°

Oblique spine support

7" H x 7" W x 14" L



Spinal Wedge 45°

Oblique spine support

9" H x 9" W x 30" L



NMC-144NC Non-Coated

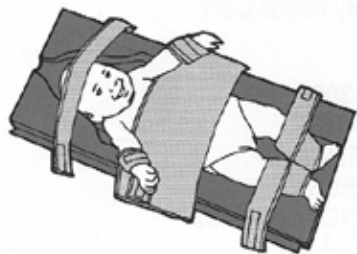
NMC-144 Scan Coated- White

NMC-141NC Non-Coated

NMC-141 Scan Coated- White

The Hugger®

Immobilizer for Infants and Children



- Provides womb-like warmth and security during immobilization
- The Hugger® complete unit includes one of each item: Foam Insert, Plexiglas Base, Head Restraint, Body Wrap with arm straps, Leg Straps
- Infant- Premature born and newborn infants up to age three (3) months
Dimension: 19" L x 9" W x 3" H
- Child- Children four (4) months to three (3) years
Dimension: 30" L x 12" W x 4" H

Infant Hugger

NMC-425

Complete Unit

Includes: Foam Insert, Plexiglas Base, Head Restraint, Body Wrap w/ Arm Straps and Leg Straps

Child Hugger

NMC-426

Complete Unit

Includes: Foam Insert, Plexiglas Base, Head Restraint, Body Wrap w/ Arm Straps and Leg Straps

Replacement Parts for Infant Hugger:

- NMC-425A Foam Insert only
- NMC-425B Plexiglas Base only
- NMC-425C Head Restraint only
- NMC-425D Body Wrap w/ arm straps only
- NMC-425E Leg Straps only

Replacement Parts for Child Hugger:

- NMC-426A Foam Insert only
- NMC-426B Plexiglas Base only
- NMC-426C Head Restraint only
- NMC-426D Body Wrap w/ arm straps only
- NMC-426E Leg Straps only

ScanCoat-Radiolucent, strong, sprayed vinyl coating
NMC-426SC Complete Unit- ScanCoat White

The CT Hugger®



- The CT Hugger's radiused base prevents artifacts
- Aluminum equivalency below 1.5 mm
- Complete unit includes one of each item: Foam Insert (Child and Infant), CT Plexiglas Base, CT Head Restraint, CT Body Wrap with arm straps, CT Leg Straps

The CT Hugger

NMC-200

Complete Unit

Includes: Foam Insert (Child and Infant), CT Plexiglas Base, CT Head Restraint+, CT Body Wrap with arm straps, CT Leg Straps

Replacement Parts for CT Hugger

- NMC-200-A-I Infant Foam Insert only
- NMC-200-A-C Child Foam Insert only
- NMC-200B Plexiglas Base only
- NMC-200C Head Restraint only
- NMC-200D Body Wrap with Arm Straps only
- NMC-200E Leg Straps only

Blanket Warmers

These units are designed to elevate blanket temperatures to a level that will increase patient comfort.

PTI-BW-150



- Capacity : 3-4 blankets
- Interior: 1.5 cu/ft
- Weight: 56 lbs

Outer Dimensions:
17" H x 18.5" W x 22.7" D

Control:

- Adjustable temperature range of (90° - 160°F)
- Operates in Celsius or Fahrenheit
- Four digit L.E.D. display
- On/off button
- Up and down adjustment buttons
- Actual temperature button
- Built-in speaker for audible feedback
- Integrated button lock-out feature

Additional features:

- Safety: In the event of a power failure the cabinet will remember its programming and begins to operate as before when power is restored.
- Safety: A warming shut-off system, separate from the electronic control, prevents overheating.
- Convenience: Access point and removable cover have been added to the back panel that allows the addition of data logging or temperature management hardware.

PTI-BW-150 Blanket Warming Cabinet

PTI-BW250 Blanket Warming Cabinet

PTI-BW-250



- Capacity : 4-6 blankets
- Interior: 2.5 cu/ft
- Weight: 67 lbs

Outer Dimensions:
21.9" H x 18.5" W x 25.7" D

Additional Features:

- Single-chamber warming cabinet
- Stainless steel exterior and white epoxy-coated interior insert
- Door is fully gasketed with a magnetic closure
- The heating system incorporates multiple zone warming that heats where and when it is needed
- All chamber surface temperatures are monitored, providing an efficient balance of heat, low energy consumption and minimal heat loss
- The heated center shelf optimizes heat distribution throughout the cavity
- 7.5 ft cubic feet interior accommodates 20-25 blankets
- Right hinged or left hinged windowed door with manual door lock

PTI-750 Blanket Warming Cabinet

PTI-750



- Capacity : 20-25 blankets
- Interior: 7.5 cu/ft
- Weight: 56 lbs

Outer Dimensions:
35.5" H x 24" W x 25.6" D

Pulmonex II® Xenon System

Double the breathing capacity of other systems

- Resistance-free breathing with 25-liter capacity
- Complete 1/8" lead shielding in upper cabinet for patient and operator safety
- Easy access to replace Drierite and Soda-Lime cartridges
- Effortless mobility for easy patient positioning
- Stylish steel cabinet
- Convenient built-in stainless steel tray for holding disposables, xenon gun, syringe etc.



Resistance-Free Breathing

- The injected bolus of xenon will reach the patient exactly when desired
- Oxygen may be added to the system any time during the study with the press of a button
- An in-line cartridge containing Soda-Lime absorbs CO², preventing acidosis.
- Large breathing passages, two 10-liter breathing bags (air-in and air-out) and motor-assisted airflow combine to provide resistance-free breathing

Simple to Operate

- All three steps of a Pulmonex II study (start up, equilibrium imaging and washout) are controlled by a single valve handle on the front panel
- The valve directs the motor-assisted flow of gases throughout the system
- A manually adjusted 15-minute timer initiates all functions, then automatically shuts down the system to complete the study after patient and system washout
- With controls conveniently located on the front panel, the user can operate the system and observe the patient and gamma camera from one position
- Panel controls are clearly marked for each mode of the procedure with large viewing windows to make it easy to monitor the patient's breathing.
- A trim, clean design, large handles and total mobility permit easy positioning of the system for studies in both seated and supine positions



Convenient Fold-Down Tray

Designed for Safety

- Internal systems of the Pulmonex II are shielded for patient and operator safety
- The system features two built-in gas traps that operate with a blower fan
- Exhaled xenon is pulled through activated charcoal housed within two 1/8" lead shielded "U"-shaped traps
- The double traps extend the life of your charcoal and provide a lengthy migration path for xenon effluent, allowing greater decay and absorption before exhaustion
- A cartridge containing Drierite serves as a moisture absorber for air passing into the trap; the charcoal trap can then more effectively remove xenon effluent after each study
- Airflow regulation of the trap blowers assures complete patient and system washout
- Averaging 30-50 studies per month, the charcoal trap will last approximately one year; charcoal traps are easily replaced
- A disposable bacteriostatic filter, used in conjunction with a disposable mask or mouthpiece, prevents system contamination



Easy access to Soda-Lime and Drierite cartridges, supplied with the system. Xenon Convenience kits, including pre-filled Soda-Lime and Drierite cartridges for single use only, are also available

Pulmonex® II Xenon System *continued*

Dimensions: 48.5" H x 22" D x 20.5" W
 Motor: UL approved. 12 volt DC
 Electrical Requirements: 115 VAC, 1 amp, 50/60 Hz

Shipping Weight: 375 lb
 Certifications: ETL and cETL Listed
 Warranty: One year



132-503 Pulmonex II Xenon System
Double-Trap, 115 VAC

Related:

136-755 Xenon Trap Monitor
150-315 Automatic Xenon Dispenser
132-319 Replacement Charcoal Trap
132-555 Refillable Cartridge, Soda-Lime or Drierite
130-900 Free Breathing Hose Kit
Xenon Gun Xenon Gun



Xenon Gun

Automatic Xenon Dispenser

- Attaches to the front of the Pulmonex System without tools
- Simply load the xenon vial into the supplied plunger assembly and at the precise moment you want the delivery of xenon, simply press the dispense button
- Xenon is automatically delivered to the patient

150-315 Automatic Xenon Dispenser
Includes 48" Flexible Tubing with Luer-Lock Adaptor



Xenon Trap Monitor

- Continuously monitors trap effluent during a xenon study, meeting compliance requirements in most states
- An exhaust hose connects from the Pulmonex II exhaust port to the Xenon Trap Monitor's intake port, making it the perfect complement
- Simple to operate; all controls are located on the front panel
- Counting results are displayed with both audible and visual signals to indicate when the xenon trap exhaust port exceeds the threshold of 99pCi/mL
- The unit can also check background levels and perform a self-test for proper operation using a check source (a 10 µCi Cs-137 Check source is required to calibrate the monitor- not included)
- Includes all the hardware necessary to mount the unit directly to the Pulmonex II Xenon System

Dimensions: 6" W x 7" L x 4" H
 Lead Shielding: 1/2" thick
 Input: 22 mm Hose Adaptor
 Detector: Halogen Quenched GM Tube, 1.1 cm Dia, 2 mg/cm² mica window
 Voltage: 500 volts regulated
 Buttons: On/ Off, Next/ Mute
 Display: 4 Digit LED, 4 RGB Function LEDs (Self Test, Background, Check Source or Count)
 Readings: pCi/ml or counts Speaker: Internal, beeps in alarm mode
 Background Count Time: 1 minute
 Power: 18 volts, UL approved, external; 115 VAC power adapter
 Weight: 5.25 lb
 Warranty: One year

136-755 Xenon Trap Monitor
Mounts to Pulmonex II Xenon Systems

101-103 Check Source, Cs-137, 10 µCi
Uncalibrated, 1" Dia x .25" thick



Mounts directly to the
 132-503 for continuous
 monitoring

NMC-503



NMC-504



NMC-502



132-774



134-772



132-684



Xenon Convenience Kits™

Air-Cushioned™ Face Mask

- NMC-500** Face Mask Convenience Kit
Includes: Bacteria filter
- NMC-503** Face Mask Convenience Kit
Includes: Bacteria filter and ultra-flex tubing (shown)
- 132-781** Face Mask Convenience Kit
Includes: Bacteria filter, ultra-flex tubing, Drierite and Soda-Lime cartridges

Xenon Convenience Kits™

Air-Cushioned™ Face Mask **with Direct Dose Administration**

- 132-699** Face Mask Convenience Kit with Direct Dose
Includes: Bacteria filter
- NMC-504** Face Mask Convenience Kit with Direct Dose
Includes: Bacteria filter and ultra-flex tubing (shown)
- 132-793** Face Mask Convenience Kit with Direct Dose
Includes: Bacteria filter, ultra-flex tubing, Drierite and Soda-Lime cartridges

Xenon Convenience Kits™

Air-Cushioned™ Face Mask **with Injection Port**

- NMC-502** Face Mask Convenience Kit with Injection Port
Includes: Bacteria filter (shown)
- NMC-505** Face Mask Convenience Kit with Injection Port
Includes: Bacteria filter and ultra-flex tubing
- 132-784** Face Mask Convenience Kit with Injection Port
Includes: Bacteria filter, ultra-flex tubing, Drierite and Soda-Lime cartridges

Xenon Convenience Kits™

with Mouthpiece and Direct Dose Administration Adapter

- 132-770** Convenience Kit, Mouthpiece
Includes: Bacteria filter and nose clip
- 132-774** Convenience Kit, Mouthpiece
Includes: Bacteria filter, nose clip and ultra-flex tubing (shown)
- 132-771** Convenience Kit, Mouthpiece & Admin Adaptor
Includes: Bacteria filter, nose clip, ultra-flex tubing, Drierite and Soda-Lime cartridges

Xenon Convenience Kits™

Air-Cushioned™ Face Mask

- 134-772** Face Mask Convenience Kit w/ Admin Adapter
Includes: Bacteria filter and ultra-flex tubing
- 132-684** Face Mask Convenience Kit w/ Luer-Lock Inj Port
Includes: Bacteria filter, ultra-flex tubing, elbow and 90° luer-lock injection port

Standing Orders ♦ Special Pricing

Quantity Price Discounts ♦ Call for Details

Call Pinestar toll-free 1-800-682-2226, to place an order

Disposable Masks



NMC-1695 Air-Cushioned Face Mask w/ Injection Port, Adult

NMC-5070 Air-Cushioned Face Mask w/o Injection Port, Adult

5080 Direct Dose Sealflex™ Mask, Lg Adult



Accessories

Drierite Moisture Absorber- Blue & White Blend



139-101 Drierite, 1 lb

139-104 Drierite, 4.5 lb

132-772 Drierite, Disposable Cartridge

Soda-Lime CO₂ Absorber

130-019 Soda-Lime, 1 lb

130-020 Soda-Lime, 4.5 lb

132-773 Soda-Lime, Disposable Cartridge



1600 Face Mask Harness, Adult

1030 Tru-fit Disposable Mouthpiece



130-100 Disposable Nose Clip, 100/box

139-680 Corrugated Tubing, 100 ft roll

130-639 Tubing Splice, 22 mm male, 10/pkg

185-302 "Y" Connector, luer plug, 22 mm

139-102 "Y" Connector, solid plug, 22 mm

0140 Tru-Fit™ Filter Kit
Must order in increments of 20

0800 Bacteria/Viral Disposable Filter-Single Use



Free Breathing Pulmonex® Hose Kit

When unrestricted breathing is critical



- The Pulmonex Xenon System has negligible internal breathing resistance, yet excess breathing resistance can be due to improper hose apparatus to the patient, particularly if long, small diameter corrugated hoses are used
- This inexpensive, high quality, "free breathing" hose kit includes all required components and adapters to replace disposables on older Pulmonex styles
- Contains two 130-901 "Clean-Bore" hoses (36" L x 1 1/8" Dia), two 130-904 hose clamps, and a 130-902 non-rebreathing anesthesia valve (inlet and outlet 7/8" O.D.), which permits the use of standard disposable bacteria filters and masks while providing unrestricted airway

130-900	Free Breathing Pulmonex Hose Kit
130-901	"Clean-Bore" Hose, 36" L
130-902	Anesthesia Valve (Hans Rudolph, non-rebreathing)
130-903	Hose Adapter, 7/8" x 1 1/8" Dia
130-904	Hose Clamp

XenoVap™ Administration System



- Inexpensive disposable device used to administer Xenon-133 and to collect the expired gas on ventilator-assisted patients
- Accommodates any standard tracheotomy tube (15 mm I.D.)
- Contains:
 - Ventilator-Assist Pump (VAP) with 2037 cc volume capacity
 - Endotracheal Tube Connection (15 mm I.D.) accommodates standard tracheotomy tube
 - Injection Site for administration of Xe-133
 - Oxygen Inlet to collection bag
 - CO₂ Absorber (pre-filled with Soda-Lime and dust filter)
 - 35-liter Collection Bag

060-139	XenoVap Administration System
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Xenon-133 Rebreathing System



060-133

- Two disposable pre-packaged complete kits to choose from:
 - 060-133 has a Mouthpiece
 - 060-137 has a Direct Dose Face Mask
- Provides the clinician with a simple, safe and inexpensive method of administering Xenon-133 to perform perfusion steady state and washout studies
- A 35 liter bag provides ample volume for patient maintenance and collection of expired Xenon-133
- Each kit comes as a complete disposable system including a pre-filled Soda-Lime absorber cartridge to prevent messy measuring and save time
- Perfusion studies are easily accomplished by placing the patient on the system and injecting the dissolved xenon/saline intravenously while the patient holds their breath
- Washout is accomplished by opening one valve, thereby admitting external air to the intake side

060-133	Xenon-133 Rebreathing System, Mouthpiece <i>Includes: Mouthpiece (130-551) (shown)</i>
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060-137	Xenon-133 Rebreathing System, Adult <i>Includes: Air-Cushioned Face Mask with Direct Dose Administration (132-698)</i>
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Venti-Scan™ IV

Radioaerosol Delivery System

The Venti-Scan IV provides greater protection and uses a special disposable Radioaerosol Convenience kit for greater trapping efficiency and unrestricted breathing.

- System design reduces set-up time:
 - kit automatically locks into position
 - one step oxygen connection to dedicated external port
 - precise injection port alignment
 - push button disposal of used kit
- Fully enclosed lead shielding from top to bottom
- Uses HEPA filter for increased trapping efficiency and resistance-free breathing
- Trapping efficiency greater than 99.9%
- Small baffle design ensures homogeneous distribution
- Mean particle size = 0.50 microns
- Lightweight and portable, weighs only 8 lb



Sharp Clear Images- Easy Breathing

- The Venti-Scan IV Radioaerosol Delivery System features a small baffle within the nebulizer to produce an optimal particle size, resulting in a sharp image, quickly.
- The kit includes a pleated hydrophilic HEPA filter which traps moisture making it ideal for radioaerosol studies by impeding the exhaled radioaerosol particles from passing through. The pleated contour increases surface area to decrease breathing resistance, making it virtually resistance-free with exceptional trapping efficiency.

1 Insert Venti-Scan IV Kit in canister



2 Inject Tc-99m DTPA

Full Technologist Protection

- The Venti-Scan IV shield is an enclosure providing lead-shielded protection from top to bottom.
- The Venti-Scan IV Disposable Kit includes everything needed for a single study including a comfortable, natural contour mouthpiece, HEPA filter, nose clip and disposable bag.
- The top of the canister has a shielded sliding port to accommodate the Venti-Pak Accessory Kit for ventilator-assisted patients. An IV pole mount is included with the shield for convenient positioning and administration.

3 Connect to O₂ supply; position patient comfortably for resistance-free breathing



177-090	Venti-Scan IV Canister <i>Includes: Shielded canister with IV pole mount</i>
177-091	Venti-Scan IV Disposable Radioaerosol Kit <i>Includes: 12" tubing, small particle delivery system with mouthpiece, HEPA filter, nose clip and disposable bag</i>
177-092	Venti-Scan IV Disposable Radioaerosol Kit <i>Includes: 24" tubing, small particle delivery system with mouthpiece, HEPA filter, nose clip and disposable bag</i>
177-075	Venti-Pak Disposable Radioaerosol Kit <i>(adapter kit for ventilator assisted patients)</i>

***First time offer- buy 75 disposable kits and get a FREE canister.
Please mention this offer when ordering.**

Call Pinestar toll-free 1-800-682-2226, to place an order

Aerotech™ I Radioaerosol System

The original Cadema Radioaerosol System



Aerosol inhalation for radioimaging studies is an important tool for use in the localization and diagnosis of lung disease. Aerotech I puts information in the hands of the user to assist in diagnosis of a variety of lung diseases.

- Enhanced Imaging
- Multiple views from one diagnostic study
- Completely portable and respirator compatible
- Completely Shielded

Enhanced Imaging

- Delivers an even distribution of radioaerosol throughout the lungs, reaching the respiratory bronchioles and alveolar ducts and sacs.
- Excellent aerosol deposition allows the acquisition of multiple views from each diagnostic study.
- The end result is high quality imaging for confidence in patient diagnosis.

Respirator Compatible

- Easily adapted to fit on line using a single accessory tube

Designed for Patient Comfort

- Aerosol inhalation studies allow the patient to breathe normally throughout the procedure, minimizing the likelihood of patient non-compliance.

Superior Safety

- Shield construction, disposable components and rapid aerosol delivery time combine to minimize radiation exposure to the patient and technologist. Aerotech I helps meet ALARA radiation protection objectives.

Flexibility

- Available with a choice of designs
 - The CA-1324 Delivery System generates a smaller MMAD particle than the standard CA-1124 Delivery System
 - Use the CA-1324 model for procedures where delivery time is not significantly restricted



LATEX FREE



177-325

CA-1124

LATEX FREE

Aerotech I Disposable Radioaerosol Kit
Includes: 24" tubing, standard nebulizer delivery system with mouthpiece, bacteria filter, nose clip and disposable bag

CA-1324

LATEX FREE

Aerotech I Disposable Radioaerosol Kit
Includes: 24" tubing, small particle nebulizer delivery system with mouthpiece, bacteria filter, nose clip and disposable bag

CA-107

Aerotech I Shield

177-325

Venti-Pak, 5/pkg
(adapter kit for ventilator assisted patients)

Swirler® Aerosol System w/ Tru-Fit™ Mouthpiece Kit

- An Aerosol Drug Delivery System that is "Precisely Alveolar"!
- The *Swirler's* patented air-flow design utilizes shear forces to create efficient atomization.
- This technology increases the delivery of droplets having the desired size (0.5 to 1.5 microns) to assure a more rapid coating of the alveoli resulting in a high resolution image.
- The *Swirler* UltraShield® is injection molded of a tungsten formulation to confirm to the shape of the *Swirler* Aerosol System. This new material and process makes the combination light in weight (less than 5 pounds) while maintaining desirable Lead Equivalent shielding.
- Standard 22 mm corrugated is NOT RECOMMENDED as it will decrease the efficiency of the study by adding dead space and wasting medication within tubing walls. If tubing must be used, we recommend using model # 1201 Extend-N-Bend Tubing stretched only as far as needed.
- Masks are to be avoided unless absolutely necessary, due to the natural filtration system of the nasal passages. In those situations where the patient has difficulty holding the mouthpiece, we recommend using the #1021 Seal-Rite Mouthpiece that seals over the lips and is held in place by a head strap.



- 7030** Swirler Aerosol System with
TruFit™ Mouthpiece Kit, 20/box
- 7041** Swirler UltraShield
for IV pole and table mounting

Insta/Vent™ Radioaerosol System Insta/Vent™ Plus Radioaerosol System Aero/Vent™ + Plus Radioaerosol System Aero/Vent™ MAX Radioaerosol System Aero/Vent™ Jr Radioaerosol System



Insta/Vent Shield



Insta/Vent Single



Insta/Vent Plus



Aero/Vent Plus



Aero/Vent Jr (Pole Mount)

- IV-600** Insta/Vent System, single tube, (24/case)
- IV-600M** Insta/Vent System, with Mask, single tube (24/case)

- IV-600P** Insta/Vent Plus System, two tube (24/case)
- IV-601** Insta/Vent or Insta/Vent Plus Portable Shield

- AV-400+** Aero/Vent Plus System, single tube (24/case)
- AV-400+M** Aero/Vent Plus System, with Mask, single tube (24/case)
- AV-501A** Aero/Vent Plus or Aero/Vent Max Portable Shield

- AV-100H** Aero/Vent Jr System, two tube (24/case)
- AV-101** Aero/Vent Jr Portable Shield (Pole Mount)

Accusync® 72 ECG Trigger Monitor



- Automatic R Wave Detection
- 3 or 5 Selectable ECG Leads
- Programmable R Trigger Delay
- External ECG Interface
- Universal Voltage

SPECIFICATIONS:

ECG Isolation Amplifier

Patient Leakage Current: less than 10 μ A with 230 V~, 60 Hz applied to the patient leads. Patient related circuitry is isolated from ground by more than 4000 V, 5500V peak.

Defibrillator Protection: 5000 V, 10ms duration

Commonmode Rejection Ratio: 90db with 51 kOhm imbalance

Input Impedance: 100 MOhm

Bandwidth: Diagnostic: 0.05 to 100Hz

LCD TFT Display: 0.5 to 50Hz

Printer: 0.5 to 100Hz

Patient Cable: a) 3 lead system; RA, LA and LL with 6 pin connector

b) 5 lead system; RA, LA, RL, LL and C with 6 pin connector

Input Bias Current: 50 nADC

Electrodeoffset Potential: ± 0.5 V

Sensitivity: 100mV peak

Display

Display Area: Height = 98mm; Width= 132.48 mm

Display indicates: heart rate, R-R interval, ECG size, ECG lead selection, audio, freeze and print indicator, Rtrigger event marker

Menudriven selection of parameters displayed on 16 color TFT ActiveMatrix Display

Outputs

1) The Rtrigger is a 5V TTL/CMOS (or 12V) compatible square wave for the computer trigger; independent of ECG signal polarity. R Wave detection and trigger to computer is indicated by audio signal and by presence of a superimposed dot on the R Wave which appears on display. The output can deliver 35mA of current or drive up to 150 feet long RGU 174/U cable. R trigger is compatible with all computers including Adac, DEC, Elscint, GE, Hitachi, MDS, Picker (Marconi), Sopha.

2) RS232 interface available to transmit and receive information via an IBM or compatible computer. In transmit mode, the interface will send the ECG data to the computer while in receiver mode the computer will control the parameters of the instrument.

3) ECG Output: Variable gain analog ECG signal up to X2000 available on a BNC connector

Dimensions: 6" H x 9" W x 7" D

Construction: Aluminum

Power: 100-240 V~ 60/50 Hz 35VA

189-079 AccuSync 72, 3-Lead System

189-080 AccuSync 72, 3-Lead System w/printer

189-083 Lead Wires,
3/set for 189-079 and - 080

189-085 Patient Cable, 9 pin,
for 189-079 and - 080

189-081 AccuSync 72, 5-Lead System

189-082 AccuSync 72, 5-Lead System w/printer

189-084 Lead Wires,
5/set for 189-081 and -082

189-086 Patient Cable,
9 pin for 189-081 and -082

Model 7600 Cardiac Trigger Monitor



- Intended use is primarily on patients in applications requiring precision R-wave synchronization
- Incorporates a simple, easy to use touch screen interface, the 7600 displays two simultaneous ECG vectors along with the patient's heart rate

Technical Specifications:

(subject to change without notice)

ECG:

Lead Selection:

Trigger Lead LI, LII, LIII and Auto

Second Lead LI, LII and LIII

Patient Cable

4 Lead cable with 6 PIN AAMI standard connector, isolated from ground related circuits by > 4 kV rms, 5.5 kV peak

Frequency Response

LCD Display & Recorder:

Filtered 1.5 to 40 Hz or 3.0 to 25 Hz

Unfiltered 0.67 to 100 Hz

ECG Output:

Unfiltered 0.67 to 100 Hz

Electrode Impedance Measurement

Technique 10Hz ac signal < 10 uA rms

Range 200 kΩ per lead

Accuracy $\pm 3\% \pm 1k\Omega$

Recommended Electrode: 10% Chloride sponge type (590436)

Cardiotach

Pediatric/ Neonate Range 10-350 bpm

Adult Range 10-300 bpm

Accuracy $\pm 1\% \pm 1$ bpm

Resolution 1 bpm

Sensitivity 300 μ V peak

Tall T Wave Rejection T waves $\leq 1.2 \times$ R-wave

Pacer Pulse Rejection

Width 0.1-2 ms at ± 2 to ± 700 mV

Recorder

Feature	Optional
Writing Method	Direct Thermal

Synchronized Output (Trigger)

Test input signal at ECG Leads

Conditions: $\frac{1}{2}$ sine wave, 60ms width,
1mV amplitude, 1 pulse/second

Output Trigger Delay <2 ms

R to R Trigger Accuracy $\pm 75 \mu$ s typical
@ 1 mV input

Pulse width options 1, 50, 100 or 150 ms

Alarms

High Rate 15-250 bpm (5 bpm increments)

Low Rate 10-245 bpm (5 bpm increments)

Asystole R to R intervals > 6 seconds

Lead Off Detached lead

Check Lead: Imbalance between leads >0.5V

Dimensions

Height 7.49"

Width 7.94"

Depth 5.18"

Weight 3.9 lb

Power Requirements

Voltage Input 100-120V ~; 200-230V ~

Line Frequency 50/60 Hz

Fuses Type and Rating F .5AH, 250V

Maximum ac Power Consumption 45VA

Power Recovery: Automatic, if power is restored within 30 sec.

Model 7600	Cardiac Trigger Monitor
	Optional Chart Recorder
590432	Patient Cable
590433	Patient Leads

Accessories for Model 3100/ 3150

590317	Patient Cable
590318	Patient Leads

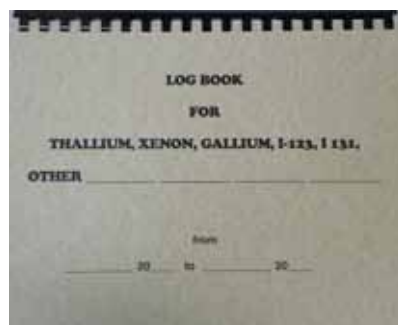
Accessories for Model 3000

590406	Patient Cable
590407	Patient Leads

590412	ECG Patient Cable
590413	ECG Lead Wires - 3 Lead Set

Call Pinestar toll-free 1-800-682-2226, to place an order

Log Books



SIMPLE, PRACTICAL, ORGANIZED NUCLEAR MEDICINE RECORD KEEPING

Radioactive Shipment Receipt Reports log book details complete receipt information. Holds a total of 150 reports.

101-A Radioactive Receipt Log Book

Wipe Test and Daily Area Monitoring log book records alpha, beta and gamma counts daily, 52 weeks in one book.

202-A Wipe Test Log Book

Radiopharmaceutical log book records up to 20 patients and 7 different kinds of kits per page. Divided into sections for Thallium-201, Xenon-133, I-123, Gallium-67, I-131 and "other", the data includes lot #, calibration, date and time, activity, number of doses, assay vials or capsules, expiration date and technologist.

303-A Radiopharmaceutical Log Book

Patients and Kits log book is designed for hospitals that receive radiopharmaceuticals directly from radiopharmacy companies. Adequate space for all pertinent information, 2000 patients and 300 kits can be recorded.

404-A Patients and Kits Log Book

Thallium-201, Xenon-133, I-131 log books are for nuclear medicine departments that perform only one of these studies or departments that need data for each study stored separately. 1040 patients can be recorded in each book.

606-A Thallium Log Book

505-A Xenon Log Book

707-A I-123 or I-131 Log Book

Tc99m Generator Kits and Patient log books are for technetium related studies only. Complete information on generator, kit and patient data can be recorded.

- 451956-A 161 pages for 23 weeks.
80 patients per week can be recorded
- 451956-B 160 pages for 20 weeks,
100 patients per week can be recorded
- 451956-C 180 pages for 20 weeks,
120 patients per week can be recorded

Model 44-9 Pancake GM Probe



Indicated Use: alpha, beta, & gamma survey; frisking; sample counting
Detector: pancake-type, halogen-quenched GM
Window: 1.7 ± 0.3 mg/cm² mica
Window Area: 15.51 cm² (2.4 in²) active; 12.26 cm² (1.9 in²) open
Efficiency (4II geometry): 5% for ¹⁴C, 22% for ⁹⁰Sr/⁹⁰Y; 19% for ⁹⁹Tc; 32% for ³²P; 15% for ²³⁹Pu, $\leq 1\%$ for ^{99m}Tc; 0.2% for ¹²⁵I
Sensitivity: typically 3300 cpm/mR/hr (¹³⁷Cs gamma)
Energy Response: energy dependent
Background: 60 cpm
Dead Time: typically 80 microseconds
Operating Voltage: 900 Vdc
Connector: series "C" (others available)
Construction: aluminum housing with beige powder-coat finish and stainless steel protective screen (79% open)
Temperature Range: 5° to 122° F, may be certified for operation from -40° to 150° F

051-449 Pancake GM Probe

051-230 Optional 39" "C" Series Connecting Cable

44-9 probe with Exposure Filter or Dose Filter also available

Model 44-38 Energy Compensated Beta Gamma Probe



Indicated Use: beta, gamma survey
Detector: 30-45 mg/cm² stainless steel wall halogen quenched GM
Detection Range: $\pm 10\%$ up to 50 mR/hr without DTC and up to 500 mR/hr with DTC
Sensitivity: 1200 cpm per mR/hr (¹³⁷Cs gamma) with window closed
Background: 20 cpm closed; 25 cpm open
Gamma Energy Response (window closed): response within 20% of ¹³⁷Cs (662 keV) from 60 keV to 1.3 MeV
Dead Time: typically 95 microseconds
Operating Voltage: 900 volts
Construction: anodized aluminum housing
Window Construction:
 Low Energy Blocking Shield: tin shields mounted on aluminum (1353 mg/cm²) with solid aluminum gap in the middle
 Low Energy Pass Through Window: solid aluminum (610 mg/cm²)
Connector: series "C"
Temperature Range: -4° F to 122° F; may be certified to operate at -40° F to 150° F
Size: 1.3" Dia x 6.5" L
Weight: 1 lb

051-278 Model 44-38 Energy Comp. Probe

051-230 Optional 39" "C" Series Connecting Cable

Model 44-7 End Window GM Probe



Indicated Use: alpha, beta, gamma survey; sample counting
Detector: end window, halogen-quenched GM
Window: 1.7 ± 0.3 mg/cm² mica
Window Area: 6 cm² (0.93 in²) active; 5 cm² (0.78 in²) open
Efficiency (4II): 2% for ¹⁴C, 10% for ⁹⁰Sr/⁹⁰Y; 7% for ⁹⁹Tc; 7% for ²³⁹Pu, 0.1% for ¹²⁵I
Sensitivity (¹³⁷Cs gamma): 2100 cpm/mR/hr
Energy Response: energy dependent
Background: 40 cpm
Dead Time: typically 200 microseconds
Operating Voltage: 900 volts
Construction: anodized aluminum housing
Size: 1.8" Dia x 5.8" L
Weight: 1 lb

051-447 End Window GM Probe

051-230 Optional 39" "C" Series Connecting Cable

Model 44-3 Low Energy Gamma Scintillator Probe



Indicated Use: ¹²⁵I and low energy gamma survey
Suggested Instruments: general purpose survey meters, ratemeters and scalers
Detector Type: scintillator, 1" Dia x 1 mm thick NaI (TI) crystal
Entry Window: 18.4 mg/cm²
Window Area: 5 cm² (0.8 in²) active and open
Sensitivity: 675 cpm/ μ R/hr (¹²⁵I)
Background (10 μ R/hr): <250 cpm
Efficiency (4II): 33.5% for ¹²⁵I (based on ¹²⁹I efficiency of 18%)
Recommended Energy Range: 10-60 keV
Energy Response: energy dependant
Photomultiplier Tube: 3.8 cm (1.5 in) diameter
Operating Voltage: typically 500-1200 volts
Connector: series "C"
Size: 2" Dia x 7" L
Weight: 1 lb

051-443 Model 44-3 Low Energy Gamma Scintillator

051-230 Optional 39" "C" Series Connecting Cable

Model 44-2 Gamma Scintillator Probe



Indicated Use: low-level, wide-energy gamma survey
Detector Type: scintillator, 1" Dia x 1" L thick NaI
Sensitivity: typically 175 cpm/ μ R/hr (¹³⁷Cs gamma)
Background: 1800 cpm
Efficiency: ¹²⁵I for 7%, ⁵⁷Co for 10%, ¹³⁷Cs for 3%, ⁶⁰Co for 3%
Recommended Energy Range: 20 KeV - 1.5 MeV
Energy Response: energy dependant
Photomultiplier Tube: 2.9 cm (1.1 in) diameter, magnetically shielded
Operating Voltage: typically 500-1200 volts
Connector: series "C"
Temperature Range: 5° to 122° F, may be certified for -40° to 150° F
Size: 2" Dia x 7.3" L
Weight: 1 lb

44-2 Model 44-2 Gamma Scintillator Probe

051-230 Optional 39" "C" Series Connecting Cable

Model 3000 Digital Survey Meter

Features

- Large backlit LCD for Ease of reading
- Auto ranging
- Rate, max and count modes of operations
- Splash-resistant construction for outdoor use
- 4-Button intuitive interface for easy operation
- All-digital calibration
- USB port
- Lighter weight and ruggedly built



*Select Probe
from page 117*

The DMS-3000 is a versatile, lightweight, ergonomically-designed instrument used with an external detector for alpha, beta, or gamma radiation survey. Three modes of operation – RATE, MAX, and COUNT – are available for the user. Measurements can be collected in two sets of units (primary and secondary) for RATE and MAX modes in cps, cpm, Bq, dpm, mR/hr, or $\mu\text{Sv/h}$ units. The user can switch between two sets of chosen units by simply pressing the Units button.

An internal switch is used to enable or disable the front-panel setup feature to protect desired settings from inadvertent modification. Setup is also available via software available from Ludlum Measurements. User-adjustable settings include calibration constant, dead time correction, efficiency, high voltage, pulse threshold, response time (fast or slow), count time, operational modes, HV current overload level, operational mode (Rate, Max, or Count), and minimum and maximum display levels. The user may also set Primary and Secondary units, unit alarm levels, count units, count alarm levels, and zero pulse protection time limit.

This instrument features a large, easily-readable LCD (liquid crystal display), a piercing audio warning tone, and easy, intuitive, user-friendly design. Splash-resistant construction allows the Model 3000 to be used outdoors. The unit body is made of lightweight, durable, high-impact plastic. The Model 3000 is shipped ready to use with batteries and calibration certificate.

Detector: may be Geiger-Mueller (GM), scintillator, or proportional

Alarms: count rate, exposure/dose, and scaler alarm setpoints adjustable over the display range

Overload: high count rate saturation protection prevents false display of lower count rates

Loss of Count Alarm Protection: after preselected time interval (default 60 seconds) of no pulses from detector, audible and visual alarms will be activated

LCD Display: 3 digit LCD with large 20 mm (0.8 in.) digits, (k)cps, (k)cpm, (k)Bq, (k)dpm, $(\mu)(m)\text{R/h}$, $(\mu)(m)\text{Sv/h}$, low-battery indicator, MAX, ALARM, AUDIO

Display Range: 0.0 cps to 99.9 kcps; 0.00 cpm to 999 kcpm; 0.00 Bq to 99.9 kBq; 0.00 dpm to 999 kdpm; 0.00 $\mu\text{R/h}$ to 999 R/h; 0.00 $\mu\text{Sv/h}$ to 999 Sv/h: Max Display can be set to limit display to calibrated range

Backlight: built-in ambient light sensor automatically activates low-power LED backlight, unless internal dipswitch is set to continuous-On (will reduce battery life)

User Controls:

- **On/Off/Quiet** - press to turn ON, tap to acknowledge alarms and silence alarm tone, press to reset Sigma Audio alarm, hold for OFF
- **Mode** - alternates between **Normal** (count rate), **Max** (captures peak rate) and **Count** (user-selectable preset count time from 0 to 10 minutes) Number of modes can be reduced in setup.
- **Audio** - turn “click” audio On/Off, turn Sigma Audio beep On/Off
- **Units** - changes the units between count rate (cpm, cps), dose/exposure ($\mu\text{Sv/h}$, mR/h), or disintegration (dpm, Bq)

Response Time: user-selectable from 1 to 60 seconds, or Auto-Response Rate Fast or Slow

Audio: greater than 75 dB at 0.6 (2 ft), approximately 4.5 kHz

Power: four alkaline or four rechargeable “AA” batteries (instrument does not support in-device charging)

Battery Life: approximately 750 hours of operation (as low as 100 hours with backlight configured for continuous-on), 16-hour low battery warning

Construction: high-impact plastic with water-resistant rubber seals and separate battery compartment

Temperature Range: -20 to 50 °C (-5 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)

Environmental Rating: NEMA (National Electrical Manufacturers Association) rating of 4x or IP (Ingress Protection) rating of 65

Size: 16.5 x 11.4 x 21.6 cm (6.5 x 4.5 x 8.5 in.) (H x W x L)

Weight: 0.9 kg (2.0 lb)

Probe Not Included. See page 117

DSM-3000
051-198

Digital Survey Meter
Check Source With Stick On Source Holder, 1.0 uCi Cs-137

Model 14C Survey Meter



The Model 14C general purpose, handheld analog ratemeter supports operating two separate radiation detectors. This instrument is set for 900-volt GM tube operation and is typically used with an external thin-wall GM tube or pancake GM. Other external detectors are also compatible with the Model 14C. An internal energy-compensated, high-range detector is used for the x10000 range only. This detector is active whenever the instrument is on and in a very high radiation field, and it will drive the meter needle to full scale, thus alerting the user. A switch allows the operator to select between the internally mounted GM detector with an exposure range of 0-20 mSv/h (0-2000 mR/hr) or an external GM or scintillator detector of choice.

A 39" straight type detector cable with "C" style connector is included.

Application: alpha, beta and gamma survey

Compatible Detectors: GM, scintillation

Detector Channels: x0.1 through x100 range settings read out the external detector channel, x1000 reads out the internal GM detector

External Detector: any GM or scintillator operating on 900 Vdc

Internal Detector: energy compensated GM, 0-20 mSv/h (0-2000 mR/hr) used with x1000 scale only

Energy Response: within 15% of true value between 60 keV-3 MeV (internal detector only)

Linearity: reading within 10% of true value with detector connected

High Voltage: 900 volts

Threshold: -40 mV \pm 10 mV

Connector: series "C"

Meter: 6.4 cm (2.5 in.) arc, 1 mA analog type

Meter Dial: typically 0-2 mR/hr and cpm, BAT TEST (others available)

Controls:

- Rotary Selector Switch: switches instrument to Off or ranges: x0.1, x1, x10, x100, x1000
- Response Switch: toggles between FAST (4 sec) or SLOW (22 sec) from 10% to 90% of final reading
- Reset Push Button: to zero meter
- Battery Pushbutton: checks battery status
- Audio Switch: for audio on/off, built-in unimorph speaker, greater than 60 dB at 0.6 meters (2 ft)

Power: 2 each "D" cell batteries (housed in an externally accessible sealed compartment)

Battery Life: typically greater than 2000 hrs (battery condition can be checked on the meter); LOW BAT warning

Construction: cast and drawn aluminum with beige powder coating

Temperature Range: -4° to 122° F

Relative Humidity: < 95%

Size: 6.5" H x 3.5" W x 8.5" D

Weight: 3.5 lb (including batteries)

- 051-016** Model 14C Survey Meter, only
Probe not included, see page 117
- 051-013** Model 14C + 44-9 Pancake Probe
(check source & holder not included)
- 051-014** Model 14C + 44-7 End Window Probe
(check source & holder not included)
- 051-4438** Model 14C + 44-38 Energy Comp Probe
(check source & holder not included)
- 051-196** Check Source Cs-137 1.0 μ Ci
- 051-197** Check Source With Stick On Holder
Cs-137 0.25 μ Ci
- 051-166** Check Source Holder
- 066-350** Replacement "D" cell battery

Model 3 Survey Meter



This general purpose, handheld analog survey meter is known for its accuracy and long-lasting dependability. The analog meter comes in a variety of measurement ranges and units to support the external radiation detector selected.

The aluminum cast instrument housing, with its separate battery compartment and accompanying metal handle, offer an industrial robustness and quality that promote long-lasting protection and instrument life. The front-panel controls include a rotary switch for selecting the four-decade range, instrument shut-off, and battery test, an audio on/off switch, a fast/slow response switch, and a count reset button.

A 39" straight type detector cable with "C" style connector is included.

Compatible Detectors: GM, proportional, scintillation

High Voltage: adjustable from 400 to 1500 Vdc

Threshold: fixed at 40 mV \pm 10 mV

Linearity: within 10% of true value

Connector: series "C"

Controls:

- Rotary Selector Switch: off, battery check, range selections for: x0.1, x1, x10, x100
- Response Switch: toggles between FAST (4 sec) or SLOW (22 sec) from 10% to 90% of final reading
- Reset: Pushbutton to zero meter
- Audio Switch: on/off, built-in unimorph speaker, 60 dB at 61 cm
- Calibration Controls: accessible from front of instrument (protective cover provided)

Meter Dial: 0-2 mR/hr, or 0-500 kcpm, BAT TEST (others available)

Power: 2 each "D" cell batteries (housed in an externally accessible sealed compartment)

Battery Life: typically greater than 2000 hrs with alkaline batteries (battery condition can be checked on the meter)

Construction: cast and drawn aluminum with beige powder coating

Temperature Range: -4° to 122° F, may be certified for operation from -40 to 150° F

Size: 6.5" H x 3.5" W x 8.5" D including handle

Weight: 3.5 lb (including batteries)

- 051-003** Model 3 Survey Meter, only
Probe not included, see page 117
- 051-196** Check Source Cs-137 1.0 μ Ci
- 051-197** Check Source With Stick On Holder
Cs-137 0.25 μ Ci
- 051-166** Check Source Holder
- 066-350** Replacement "D" cell battery

Select Probe from page 117

Model 14C Survey Meter

w/ Pancake GM Probe w/ Exposure Filter

Ideal for RA-223



- Monitors alpha, beta and gamma
- 0-2 R/hr range
- Five counting scales (x0.1, x1, x10, x100, x1000)

The Model 14C Survey Meter meets the essential monitoring and surveying needs of most nuclear medicine facilities. The exposure filter flattens the response for energies between 33 keV to 1.2MeV. For background readings, the unit's built-in GM detector handles counts up to 2R/hr. For beta emitters, the pancake probe has approximately twice the counting efficiency as an end-window detector. For high-range gamma detection, the internal detector with the x1000 multiplier range is used.

Specifications: 14C Survey Meter

Detector: Free air ion chamber 2.5" diameter x 3.5" L

Meter Face: 0-2 mR/hr, 0-2 mR/hr, 0-6.6k cpm

Meter Face Dimensions: 2.43L x 1.43" W

Multiplier Range: x0.1; x1; x10; x100 for external detector; x1000 for internal detector

Internal Detector: Energy-compensated GM, for high range gamma detection only; 2000 mR/hr

Reset: Push button to zero meter after over-range exposure

Sensitivity: 2100 cpm/mR/hr for Cs-137

Batteries: Two each, size "D", typical life 600 hours

Dimensions: 8.5" L x 3.5" W x 6.5" H

Weight: 3.5 lb including batteries

Specifications: Pancake GM Probe w/ Exposure Compensation Filter

Indicated use: Alpha, beta, and gamma surveying; sample counting

Detector: pancake type halogen quenched GM

Window: 1.7 ±0.3 mg/cm² mica with exposure filter

Window Diameter: 1.75"

Window Area: 15.5 cm² active, 12 cm² open

Efficiency (4pi): 5% for C-14, 22% for Sr-90/Y-90, 19% for Tc-99, 32% for P-32, 15% for Pu-239

Dimensions: 1.8" H x 2.7" W x 10.7" L

Weight: 1 lb

051-045 Model 14C Survey Meter with
Pancake GM Detector w/ Exposure Filter
*Includes: Internal Energy-Compensated GM Detector,
External Pancake GM Probe with Exposure Filter, Cable*

051-196 Check Source Cs-137 1.0 µCi

051-197 Check Source With Stick On Holder
Cs-137 0.25 µCi

051-166 Check Source Holder

Surface Survey Meter



- Monitors alpha, beta and gamma
- Built-in pancake detector
- Range: 0 to 50,000 cpm, 0 to 15 mR/hr
- Three multiplier ranges: x1, x10, x100
- Built-in speaker
- Anti-saturation circuit prevents false "zero" readings
- One-handed operation

This compact 3-range surface rate meter is equipped with an internal 2-inch diameter pancake GM detector and built-in speaker. The detector's thin window is recessed and protected by an aluminum grill. Its small size, light weight, and one-hand operation make this unit an ideal tool for surveying bench tops and other surfaces, and for checking hands and clothing for radioactive contamination. The meter face reads in both cpm and mR/h. Anti-saturation circuitry keeps meter needle at full scale in high radiation fields.

Specifications:

Meter Dial: 2.5" rectangular

Ranges: Three linear: 0-500; 0-5,000; 0-50,000 cpm (0-0.15; 0-1.5; 0-15 mR/h)

Switch Positions: Off, Battery Test, X100, X10, X1

Audio: Internal speaker

Detector: Halogen-quenched pancake GM tube

Diameter: 2"

Window Diameter: 1.75"

Window Thickness: 1.5 mg/cm²

Background: Typical 50 cpm

Efficiency: 100% for all betas and alphas that have the energy to penetrate the thin window

Gamma Sensitivity: Nominal is 3000 cpm/mR/h (based on Cs 137)

Calibration: Single master calibration potentiometer, individual potentiometers for each range

Voltage: 900V nominal

Current Drain: 3mA typical

Power: 9-volt battery (Eveready 1222 carbon, E146X mercury or equiv.)

Battery Life: Typically 100 hours under normal operation

Feet: Neoprene feet for placement on surface without contaminating bottom of surface unit

Handle: Swivel type, polished anodized aluminum

Dimensions: 3" W x 5.25" L x 2.25" H excluding meter & handle

Weight: 22 oz

069-310 Surface Survey Meter

Digital Cutie Pie Survey Meter



- Detects alpha, beta, gamma, x-ray
- Axial detection of gamma or x-ray below 5 keV
- Rate Range: 0.1 mR/hr- 9.999 R/hr
- Dose Range: 0.01 mR- 99.9 R
- Digital LCD display- 8 digit rate, 8- digits integrate

Based on stable and essentially drift-free electrometer technology, this sensitive ion chamber instrument has high sensitivity for alpha and low-to-high energy beta particles, and to gamma and x-ray radiation. The compact and lightweight Digital Cutie Pie is useful for measuring exposure and dose rates, determining shielding effectiveness, checking source containers, monitoring radiation areas, and checking results following decontamination procedures. Readout is in mR/hr or mR. Rate range is 0.1 mR/hr - 9.999 R/hr in a single range. Because of their energy independent response, ion chamber survey meters are recommended for any dose rate measurements made for regulatory compliance (i.e. licensing, state regulations).

Specifications:

Detector: Free air ion chamber 2.5" Dia x 3.5" L, 260 cc internal volume

Wall, Cap: Graphite-lined 180 mg/cm² walls, 540 mg/cm² cap

Window: 2.0" Dia x 0.5 mg/cm² Mylar

Readout: LCD 8-digit

Indicator Lamp: Green LED, 10 pulses/sec per mR/h

Range:

Rate: 8-digit, 0.1 mR/hr to 9.999 R/hr

Integrate: 8-digit, 0.01mR- 99.9 R in a single range

Electrometer: Solid State MOSFET input

Electronics: A-D converter, LCD drivers

Batteries: 10 ea. (button) NEDA CR-1220 (7-yr shelf life), 6 ea (AA) NEDA 15A (typically 1000 hr)

Dimensions: 5.5" H x 3.5" W x 8" L includes handle

Weight: 26 oz with batteries

051-366 Digital Cutie Pie Survey Meter, mR/h

Pressurized μ R Ion Chamber Survey Meter



- High μ R sensitivity measurement of rate and dose simultaneously
- Records peak rate using "Freeze Mode"
- Auto-ranging and auto-zeroing
- RS-232 communications interface with optional Windows-based Excel add-in for data logging
- Ergonomic, anti-fatigue handle with replaceable grip, wrist strap and tripod mount
- Programmable flashing LCD display
- Easily-accessible battery door (operated by two 9-volt alkaline batteries) on the outside of the bottom case
- Available with dose equivalent energy response (SI units)

Specifications:

Radiation detected: Beta > 1MeV; Gamma > 25 keV

Operating ranges (response time): 0 μ R/h to 500 μ R/h (5 sec); 0 mR/h to 5 mR/h (2 sec); 0 mR/h to 50 mR/h (1.8 sec); 0 mR/h to 500 mR/h (1.8 sec); 0 R/h to 5 R/h (1.8 sec)

Accuracy: Within 10% of readings between 10% and 100% of full scale indication on any range, exclusive of energy response

Detector: Chamber- 230 CC Pressurized ionization chamber to 8 atmospheres or 125 psi; Controls- ON/OFF and MODE

Automatic features: Auto-zeroing, auto-ranging, and auto-backlight

Display LCD analog/ digital with backlight:

Analog- 100 element bar graph 6.4 cm long. Bar graph is divided into 5 major segments, each labeled with the appropriate value for the range of the instrument

Digital- 2.5 digit display is followed by a significant zero digit depending on the operating range of the instrument. The units of measurement are indicated on the display at all times. Digits are 6.4 mm high. Low battery and freeze indicators are also provided on the display.

Modes:

Integrate Mode- Operates continuously 30 seconds after the instrument has been turned on. Integration is performed even if the instrument is displaying in mR/h or R/h

Freeze Mode: Will place a tick mark on the bar graph display to hold on the peak displayed value. The unit will continue to read and display current radiation values

Environmental: Temperature Range -4° F to 122° F; Relative Humidity 0% to 100%; Geotropism- Negligible

Typical energy dependence: ¹⁶Nitrogen gamma rays are 110% to 120% of indicated readings as determined at the University of Lowell

Power requirements: Two 9 V alkaline batteries, 200 hours operation

Dimensions: 4" W x 8" D x 6" H

Weight: 2.4 lb

451P-RYR Pressurized μ R
Ion Chamber Survey Meter

451B-RYR Pressurized μ R Ion Chamber Survey Meter
With Sliding Beta Shield

Portable Ion Chamber Survey Meter



The RI-02 is the next generation chamber survey meter.

- Compliant with ANSI 42.17A-2003
- Gamma & Beta + Gamma detection
- Freeze mode, retains peak reading
- Compact, lightweight and rugged construction
- Custom LCD display with LED backlight
- Auto Ranging Digilog display
- Long battery life: 100 hours
- USB connectivity
- Computerized calibration
- Easy replacement of batteries and silica gel container
- Auto switching from Gamma to Beta + Gamma modes

Radiological Characteristics:

- Measurement Range:
 - Display 0.00 $\mu\text{Sv/h}$ to 1 Sv/h (0.00 mR/h to 100 R/h)
 - Measuring: 1 $\mu\text{Sv/h}$ to 1 Sv/h (0.1 mR/h to 100 R/h)
 - Dose: Up to 10 Sv (1000 R)
 - Energy Response: from 20 keV to 2 MeV
 - Linearity: reading within 10% of true value (137Cs)
 - Response Time: 2 seconds in fast transition, or 30 seconds for gradual transition
 - Chamber Volume: 350 cm^3
 - Side Wall: Plastic- 300 mg/cm^2
 - Beta Shield: retractable 1000 mg/cm^2 aluminum slide
 - Window: 7 mg/cm^2 mylar cloth material
 - Window Area: 7.8 in^2

Electrical Characteristics:

- Power: 2 each "C" cell batteries housed in a sealed externally accessible compartment
- Battery Life: >200 hours
- Data Connection: USB for calibration, configuration, upgrade firmware and stored data points

Mechanical Characteristics:

- Display: multi-segments liquid crystal display with LED backlight
- Pushbuttons: 4 pushbutton, short and long press
- Size: 8.25" L x 4.5" W x 6" H (without handle)
- Weight: 3 lb with batteries
- Construction Material: Hi Impact Plastic

Environmental Characteristics:

- Temperature Range: 23°F to 122°F

Digital Handheld Dose Rate Meter



The RDS-30 is a Digital Handheld Dose Rate Meter designed for a wide range of applications involving a possibility for abnormal radiation levels

- Measurement and display in $\mu\text{Sv/h}$ or mrem/h
- Dose measurement indication
- High battery life time (>1 year)
- Compliant to IEC 60846
- Dose rate follow-up by audible signal with frequency proportional to dose rate
- Visual and audible alarm: user settable for dose and dose rate over the whole measurement range
- Histogram capability of up to 480 dose rate values with user settable logging interval
- Backlit display with six large digits

Radiological Characteristics:

- Radiation detected: gamma and X-ray from 48 keV to 3 MeV
- Detector: energy compensated GM tube compliant to H*(10)
- Dose rate measurement range: from 0.01 $\mu\text{Sv/h}$ to 100 mSv/h or from 1 $\mu\text{rem/h}$ to 10 rem/h
- Dose rate linearity: $\pm 10\% \pm 1$ digit within the range of 0.1 $\mu\text{Sv/h}$ to 100 mSv/h or 10 $\mu\text{rem/h}$ to 10 rem/h
- Calibration accuracy: $\pm 5\%$ of the reading in 137Cs exposure, at 3 mSv/h, $\pm 20^\circ\text{C}$ (68°F)
- Energy response: $\pm 30\%$ over the range of 48 keV - 3 MeV
- Angular response: $\pm 25\%$ within $\pm 45\%$ from the calibration direction at 48 keV
- Dose measurement range: from 0.01 μSv to 1 Sv or from 1 μrem to 100 rem

Mechanical Characteristics:

- Case : rugged plastic, easy to decontaminate
- Dimensions: 3" x 5" x 1.25"
- Weight: .5 lb with batteries

Electrical Characteristics:

- Power supply: 2 alkaline batteries IEC LR6/AA size (recommended)
- Battery life time: at least 2000 hours at normal background with alkaline cells (more than 1 year under normal operation)
- Battery alarm: two-step alarm for low battery voltage
- Electromagnetic compatibility: CE compliant

Environmental Characteristics:

- Temperature range: -13°... 131°F operational
-40°... 158°F storage
- Protection level: IP67 (temporary immersion/floating device)

Monitor 4 Survey Meter



- Monitors alpha, beta, gamma and x-ray radiation
- Dual-scale analog meter (CPM and mR/hr)
- Operating range: 0-50 mR/hr, 0-50,000 cpm
- Multiplier selections: x1, x10, x100
- Red LED flashes with counts
- Audible beep indicates rising radiation level
- Operates up to 2,000 hours on 9V battery
- Weighs less than 9 ounces (including battery)

Specifications:

Detector: Halogen-quenched uncompensated GM tube with thin mica window 1.5- 2.0 mg/cm² thick

Energy Sensitivity: Detects alpha down to 2.5 MeV; typical detection efficiency at 3.6 MeV is greater than 80%
Detects beta at 50 keV with typical 35% efficiency; Detects beta at 150 keV with typical 75% efficiency

Detects gamma and x-rays down to 10 keV typical through the end window, 40 keV minimum through the case

Accuracy: ±15% of full scale (referenced to Cs-137)

Visual Indicators: .875" x 1.75" dual scale analog meter, marked 0-500 cpm and 0-0.5 mR/hr; LED count light

Audio Indicator: Internally mounted beeper (can be switched off for silent operation).

Range Switch: x1, x10, x100, battery check

Ranges: 0-500, 0-5,000, 0-50,000 cpm and 0-0.5, 0-5, 0-50 mR/hr

Current Drain: Typically 190µA at background radiation levels

Operating Voltage Range: 7-11 Volts DC

Voltage Regulation: High and low voltage fully regulated

Power Requirement: One 9-volt alkaline battery, NEDA #1604A, or equivalent

Battery Life: Up to 2000 hrs at normal background radiation levels

Temperature Range: -4°F to +131°F

Dimensions: 8.25" x 2.75" x 1.87"

Weight: 9.7 oz including battery; 7.2 oz without battery

078-400 Monitor 4 Survey Meter

*Includes: Protective case
(battery not included)*

Inspector Survey Meter



078-510

078-513

078-514

- Count range: 1 to 9,999,000 counts
- Range: 0-350,000 cpm
- Red LED count light
- Audible beeper (can be switched off)
- External calibration controls
- Adjustable timer from 1 to 24 hours; default is 10 minutes
- User selectable display for mR/hr or Sieverts
- Internal Memory
- Observer USB Software - can be downloaded
- Includes case
- Wipe Test Plate positions wipe directly in front of detector at 1 cm distance; protects GM from damage/contamination when meter is not in use

Specifications:

Detector: Halogen-quenched uncompensated GM tube with thin mica window, 1.4- 2.0 mg/cm² area density

Window: 1.77" effective diameter

Display: Four-digit liquid crystal display with indicators

Averaging Periods: Display will update every 3 seconds; at low background levels, the update is the moving average for the past 30-second time period; time period for moving average decreases as radiation level increases

Gamma Sensitivity: 3340 cpm/mR/hr (referenced to Cs-137); smallest detectable level for I-125 is .02 µCi at contact

Operating Range: mR/hr- .001 (1µR) to 100; CPM- 0 to 350,000
µSv/hr- .01 to 1000; CPS- 0 to 5000

Energy Sensitivity: Detects Alpha down to 2 MeV . Detects Beta down to .16 MeV; typical detection efficiency at 1 MeV is approx. 25%.

Accuracy (Referenced to Cs-137): Typically ±15% from 0 to 100 mR/hr

Timer: One minute to 24 hours, default is 10 minutes

Count Light: Red LED flashes with each radiation event

Audio Indicator: Internally mounted beeper (can be switched off for silent operation)

Outputs: Dual miniature jack drives CMOS or TTL devices for counting to computer or data logger

Utility Menu: Options accessed by holding down "+" button while turning instrument on: 3-second (fast response), switch from mR/hr and CPM to µSv/hr and CPS, adjust probe settings, reset all settings to original factory setting (default)

Built-In Efficiencies: ³²Sulfur (S35), ⁹⁰Strontium (Sr/y90), ¹³⁷Cesium (Cs137), ³²Phosphorus (P32), ¹⁴Carbon (C14), ¹³¹Iodine (I131), ⁶⁰Cobalt (Co60), and Alpha

Power Requirements: (1) 9-volt alkaline battery

Temperature Range: 14°F to 122°F

Battery Life: Typically 2000 hrs at normal background radiation levels

Dimensions: 5.9" H x 3.2" W x 1.2" D

Weight: 9.6 oz without battery

078-514 Shield Dimensions: 10.3" L x 4.8" W x 1.5" H, Weight 7.8 lb

Construction: Steel with .05" thick lead lining in left and right side walls

078-510 Inspector Survey Meter only

078-513 Inspector Survey Meter

Includes: Wipe test plate and adapter (installed)

078-514 Inspector Survey Meter Shield

For 078-513

Model 177 Alarm Ratemeter



The Model 177 is a rugged benchtop ratemeter with alarming capability. They are very popular for frisking operations at stations where line power is available but can also be used in portable applications for up to 50 hours using the internal rechargeable battery.

The 177 supports GM and scintillation type detectors and displays the results on a linear readout analog meter. The audio alarm is adjustable from 0 through 150% of full scale, and is factory set to latching. Reconfiguration to non-latching can be accommodated via a minor internal change.

Front-panel controls include a 4-position rotary switch for selecting each detector decade, an alarm set control, an audio volume adjust, fast/slow response switch, power on/off switch and push buttons for count reset, battery test, high-voltage test and alarm test. The back panel contains the power cord connection and a 9-pin type "D" plug, power output, alarm output, pulse output, and a recorder output.

Indicated use: multi-purpose radiation monitoring, surveying; frisking

Suggested Detectors: GM; scintillation

High Voltage: adjustable from 400 to 1500 volts

Input Sensitivity: adjustable from -10 to -100 mV

Linearity: within 5% of full scale

Meter: 6.4 x 6.4 cm (2.5 x 2.5 in) 1 mA, DC movement

Meter Dial: 0-500 cpm; 0-1.5 kV; BAT TEST

Audio: built-in unimorph speaker, with volume control, to provide click-per-event audio or audible alarm indicator

Alarm Set: front-panel locking control allowing alarm to be set at any point on the meter (can be read on meter)

Alarm: indicated by red lamp and full volume audible tone (greater than 60 dB at 61 cm (2 ft))

Calibration Controls: accessible from back of instrument (protective cover provided)

Reset: pushbutton to zero meter and/or reset alarm

Multipliers: x1, x10, x100, x1k

Response: toggle switch control selects FAST (2.2 sec) or SLOW (22 sec) response, for 90% of full scale reading

Data Out: 9-pin series "D" connector allowing for external connections of the following items: battery, unregulated supply, instrument common ground, alarm signal (current sink), pulse out, external background subtract, and recorder output.

Recorder Output: correlated to meter reading (adjustable to 0 to 1.25 volt at 1 mA)

Power: 95-250 Vac through wall adaptor, and 6-volt sealed lead-acid rechargeable battery (built-in)

Battery Charger: battery is continuously trickle-charged when instrument is connected to line power and turned on

Battery Life: typically 50 hours in non-alarm condition (battery condition can be checked on meter)

Size: 5" H x 8" W x 6" L

Weight: 4.2 lb

051-177 **Model 177 Alarm Ratemeter**
Probe not included

Select Probe from page 117

Model 177 Alarm Ratemeter with Pancake GM Probe and Foot Monitor



- Monitors alpha, beta, and gamma radiation
- Audible alarm with red indicator light for continuous area monitoring
- Portable surveying with Pancake GM Probe (cable included)
- 0-500K cpm range
- Operates on wall current or rechargeable battery
- Equipped for simultaneous hand and shoe contamination monitoring
- Includes:
 - Model 177 Alarm Rate Meter (051-177)
 - Model 44-9 Pancake GM Probe (051-449)
 - Model 44-26 Pancake GM Foot Frisker
 - Tee Connector
 - 39" Cable (2)

Model 177 (051-177) specs are listed to the left of this page

Model 44-9 (051-449) specs are listed on page 117

Model 44-26 Pancake GM Foot Frisker Specs:

Indicted Use: alpha, beta, gamma foot monitor

Detector Type: 3 pancake-type, halogen quenched GMs

Sensitivity: typically 9900 cpm/mR/hr

Window: 1.7 + 0.3 mg/cm² mica

Window Area: Active 46 cm², open 27 cm²

Efficiency (2pi geometry): 10% fpr C-14, 45% for Sr-90, 38% for Tc-99, 65% for P-32, Alpha 30%

Energy Response: energy dependent

Housing: Aluminum

Dimensions: 10.8" H x 7" W x 9" L

Weight: 4.4 lb

Cable: 60", type "C" connectors ("T" connector included for simultaneous use with Pancake Probe)

051-027 **Alarm Ratemeter**
Includes: Model's 177, 44-9, 44-26,
Tee Connector and Cable

Model 2241-2 Digital Ratemeter/Scaler

- Model 2241-2 is a general purpose, digital ratemeter with a built-in scaler that provides timed counts over a user specified period.
- This system will store detector setup information for up to two detectors and offers a front-panel mounted rotary switch so personnel can quickly swap detectors in the field.
- The LCD presents readings in a four-digit moving decimal format together with one of a wide range of available units of measure and is accompanied by several operational and alert icons.
- The LCD backlight can be activated and remains lit for a user-adjustable interval.
- This instrument features adjustable alert and alarm setpoints for both the Ratemeter and Scaler modes.
- Front-panel controls include a rotary switch for selecting between Off, Ratemeter Mode, and Scaler Mode, switches for audio on/off and fast/slow response time, plus push buttons for activating the LCD backlight, and for either resetting the counts or acknowledging any alarms.
- A locking toggle switch facilitates swapping detectors while preventing accidental switching.
- Calibration, user configured alarms, scaler count intervals and detector setups can be configured via an internally housed switchboard or through an RS-232 serial interface to a PC.



Specifications:

Suggested Detectors: GM, proportional, scintillation

Alert/Alarm: indicated by annunciation on display and audible tone

Display: 4-digit (6-digit in scaler mode) LCD display with 1.3 cm (0.5 in.) high digits, separate annunciators for display units, alert, alarm, low battery, detector overload, counting overflow, and scaler counting

Backlight: pushbutton to activate

Ratemeter: displays in R/hr, Sv/h, cpm, or cps with selector switch at RATE position

Display Range: auto-ranging from 0.0 μ R/hr-9999 R/hr; 0.000 μ Sv/h-9999 Sv/h; 0 cpm-999 cpm; or 0 cps-100 kcps

Scaler: adjustable from 1-9999 seconds (in 1-second intervals)

Linearity: readings are within 10% of true value

High Voltage: 400-2400 volt

RS-232 Port: allows for programming and non-volatile storage of operating parameters, including display units, display range, alarm setpoints, dead time correction, click-per-event divide-by, LCD backlight On time, Fixed or Variable response time, and count overflow visual alarm. The switch board can be removed after entering or changing parameter to prevent tampering with setup values.

Discriminator: adjustable from 2-100 mV

Power: 2 "D" cell batteries housed in an externally accessible sealed compartment

Battery Life: typically 200 hours with alkaline batteries (low battery warning on LCD)

Temperature Range: -4° to 122 °F

Size: 6.5" H x 3.5" W x 8.5" L

Weight: 3.5 lb including batteries

2241-2

Digital Ratemeter/Scaler

Probe not included

Select Probe from page 117

Digital Area Monitor

Available in mR/hr or μ Sv/hr



- Detects gamma radiation
- LOW and HIGH alarms with yellow and red lights, adjustable audible tones
- 0.1 mR/hr- 1000 mR/hr or 1 μ Sv/h- 9999 μ Sv/h
- Detector failure light and tone to signal detector overload or instrument failure
- Threshold adjustment from 2 to 100 mV
- Battery continuously trickle charges when unit is operating and connected to wall current
- Low battery warning

Designed for visibility and ease of use. This monitor incorporates an internally housed energy compensated GM detector with a range from 1 μ Sv/h to 9999 μ Sv/h (0.1 mR/hr to 1R/hr). It features a wall-mount chassis and a four-digit LED display that is readable from 9 meters (30 ft) away. Backlit indicators warn of low radiation (yellow), high radiation (red), instrument failure (red), and low battery (yellow), along with an alarm. A green status light is a positive indication of instrument operation

Parameters are protected under a calibration cover. Calibration is easily accomplished by moving the CAL dipswitch to the right, and using the pushbuttons to increment or decrement the calibration constant, dead time correction, and alarm point parameters. Parameters are stored in non-volatile memory (retained even with power disconnected). A five-decade logarithmic analog output is provided. A battery backup provides 48 hours of additional use after the primary power is removed.

Specifications:

Internal Detector: Halogen quenched GM gamma detector, sensitivity: 1000 cpm/mR/hr (Cs-137 gamma), energy response (60 keV- 3MeV): within \pm 25% of true value

Display: Four-digit LED display with 0.8" (2 cm) character height

Display Range: 000.0- 9999

Display Units: Available in mR/hr or μ Sv/h

Linearity: Reading within \pm 10% of true value with detector connected

Response: Typically three seconds from 10%- 90% of final reading

Status: (Green light) instrument functioning properly

Alarm: Low alarm- indicated by yellow light and slow beep (one per second) audible tone (can be set at any point from 0.0- 9999); high alarm- indicated by red light and fast beep (4 per second) audible tone (can be set at any point from 0.0- 9999); NOTE: Audible indicators can be configured as a single beep if desired

Det Fail: Detector overload, no count from detector, or instrument failure- indicated by red light and audible tone (greater than 68 dB at 2 feet)

Low Bat: (yellow) indicates less than two hours of battery power remaining

High Voltage: Adjustable from 200- 2500 volts

Threshold: Adjustable from 2- 100 mV

Dead Time: Adjustable to compensate for dead time of detector and electronics (can be read on display)

Overload: Senses detector saturation (indicated by display reading "- OL -")

Overrange: Indicates radiation field being measured has exceeded counting range of instrument (indicated by display reading "- - - -")

Data Output: 9 pin connector providing 5 decade logarithmic output, RS-232 output, signal ground connection, FAIL and ALARM signals (current sink), and direct connection to battery and ground

Calibration Controls: Accessible from front of instrument (protective cover provided)

Power: 90-260 VAC auto ranging or battery power

Battery Life: Typically 48 hours in non-alarm condition; 12 hours in alarm condition

Battery Charger: Battery is continuously trickle charged when instrument is connected to line power and turned on

Battery Dependence: < 3% change in readings to battery endpoint

Construction: Wall mount aluminum housing with ivory polyurethane enamel paint

Dimensions: 7.4" H x 9.7" W x 2.5" D

Weight: 6.7 lb

051-275

Digital Area Monitor, 90-260 VAC

Includes: Built-in GM Gamma Detector

Display is in mR/hr

051-273

Digital Area Monitor, 90-260 VAC

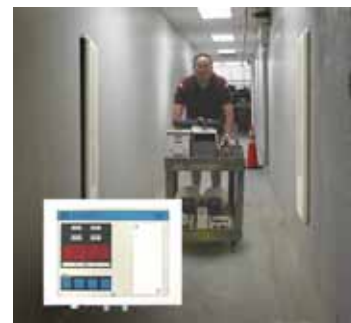
Includes: Built-in GM Gamma Detector

Display is in μ Sv/hr

Surface / Waste Contamination Monitor



- Excellent surface contamination screening tool for:
 - Small articles
 - Baggage
 - Packages
 - Medical waste
- Affordable digital controller
- Dual large plastic scintillator detectors
- Programmable alarms
- Networkable
- 24-hour battery backup



- The Model 375P-336 is a Digital Model 375 Controller coupled to two 2753 cm (168 in) plastic scintillation detectors.
- These components are indoor units that are typically wall-mounted.
- This simple and cost-effective solution offers a system that is easy to operate and maintain.
- The controller supplies local alarms, but can also be connected to external alarms or even put onto an Ethernet network if desired.
- It additionally has a 24-hour battery backup to keep the system operational in the event power is lost.

Medical Application: This instrument is ideal for monitoring personnel or laundry for possible contamination in the nuclear medicine department. The monitor may also be used as a radiation contamination triage device to alert emergency department personnel of potentially contaminated patients or equipment coming into the emergency room.

Surface Contamination Inspection: Inspecting items using hand held instruments can be too time consuming in many cases. The Model 375P-336 facilitates a more rapid and uniform inspection by placing two relatively large sized scintillation detectors in close proximity to the incoming or outgoing articles undergoing inspection. Both detectors are continuously monitored by the digital controller so any offending item can immediately trigger an alarm. Alarm conditions can be set up to automatically halt production conveyance devices, notify the central office, and even alert key personnel to initiate an immediate response.

Specifications:

Detector: 2 ea. 2753 cm³ (168 in³) plastic scintillation detectors. Each detector is supplied with a 15.2m (50 ft) coaxial cable.

Display: 4-digit LED display with 2 cm (0.8 in.) digits

Display Units: can be made to display in microR/hr, mR/hr, R/hr, microSv/h, mSv/h, Sv/h, cpm, cps, and others

Range: 0.0 to 9999 kcps

Linearity: reading within 10% of true value

Response: typically 3 seconds from 10% to 90% of final reading

Status: (green light) instrument functionally properly

Sigma Alarm: indicated by red ALARM light and audible tone (can be set at any point from 0.0 to 999 sigma)

Sum Alarm: indicated by red ALARM light and audible tone (can be set at any point from 0.0 to 9999 kcps). NOTE: audible alarm annunciators can be configured as a single beep if desired

Det Fail: red light and audible tone: greater than 68 dB at 61 cm (2 ft) indicates no counts from detector or instrument failure

Low Bat: (yellow) indicates less than 2 hours of battery power remaining

Overrange: indicates measured radiation field has exceeded counting range of instrument (indicated by display reading ("___"))

Relay Output: mains (120 or 240 Vac) output on alarm, 9-pin connector providing RS-232 output, signal ground connection, FAIL and ALARM signals (current sink) and direct connection to battery and ground

Calibration Controls: accessible from front of instrument (protective cover provided)

Power: 95-135 Vac (178-240 Vac available), 50-60 Hz, 6 volt sealed lead-acid rechargeable battery (built-in)

Battery Life: typically 24 hours in non-alarm condition

Battery Charger: battery is continuously trickle-charged when instrument is connected to line power and turned on

Temperature Range: 5° to 122 °F

Construction: aluminum housing with ivory powder-coat paint

Size: electronics: 10.3" H x 9.7" W x 3.3" L

detectors (ea): 41" H x 6.75" W x 2.125" L

Weight: electronics: 9.3 lb; detectors (ea) 23.5 lb

375P-336 Surface/Waste Monitor

H51R-LED Horn/ Strobe LED Light

APC-336 Al protection for Detector & Crash Bar

Direct Reading Dosimeters



- Provide an accurate and instantaneous indication of accumulated exposure for personnel working in radiation areas
- Accurate to 10% of True Dose for Cs-137 or Co-60 gamma
- Less than 0.5% leakage of full scale in 24 hours at 50° C
- Hermetically sealed
- Resembling fountain pens in size and appearance, they contain a quartz fiber electrometer and compound microscope
- The fiber is set at zero with a battery operated charger. As X- or gamma rays strike the charged Dosimeter, the fiber moves up in scale in proportion to the radiation exposure

019-201	Direct Reading Dosimeter, 200 mR
019-500	Direct Reading Dosimeter, 500 mR
019-010	Direct Reading Dosimeter, 2 R

Dosimeter Charger



- Used to "zero" all Direct-Reading Dosimeters
- For use with Direct Reading Dosimeters only

020-001	Dosimeter Charger (battery included)
066-350	Replacement Battery

Electronic Pocket Dosimeter

For personnel who may be exposed to radiation, the Electronic Pocket Dosimeter allows you to check and monitor accumulated amount of radiation exposure.



- Three models to choose from:
 - PDM-122
 - Measurement range from 0.1 mRem to 1000 REM
 - Dose Rate of 0.1 mRem/h to 100 Rem/h
 - Energy dependence of $\pm 30\%$ from 50 keV to 1.5 MeV
 - PDM-127
 - Measurement ranges from 0.1 mRem to 100 Rem
 - Dose rate of 0.1 mRem/h to 10 Rem/h
 - Energy dependence of $\pm 30\%$ from 30 keV to 200 keV
 - PDM-222
 - Measurement ranges from 0.1 mRem to 1000 Rem
 - Dose rate of 0.1 mRem/h to 100 Rem/h
 - Energy dependence of $\pm 30\%$ from 50 keV to 1.5 MeV
 - Includes backlit display and alarm function
- *Also available in $\mu\text{Sv/hr}$*

PDM-122	Electronic Pocket Dosimeter
PDM-127	Electronic Pocket Dosimeter
PDM-222	Electronic Pocket Dosimeter
PDM-BAT	Replacement Battery

Electronic Personal Dosimeter

- Monitor exposure to ionizing radiation in real time and emit both audible and visual alarms so that personnel can react quickly when an acceptable dose rate level is exceeded.
- Excellent response to gamma radiation, beta radiation, neutron radiation and x-ray radiation
- **Accuracy:** Hp(10) 137Cs $\pm 10\%$; Hp (0.07) 90Sr/90Y $\pm 20\%$
- **Alarms:** Dual Hp(10) dose rate alarms. HP (0.07) dose and dose rate alarms; typically 98 db(A) at 20cm with multiple modes
- **Battery type:** Either single AA battery 1.5V alkaline cell for up to 30 weeks continuous operation or 3.6V lithium for typically five to ten months continuous operation (interchangeable) (depending on battery type)
- **Dose:** 0 to $>1.6 \times 10^6$ mrem
- **Dose Range:** 0 to $>4.0 \times 10^5$ mrem/h
- **Size:** 3.34" D x .75" H



EPD-Mk2 Electronic Personal Dosimeter, gray

Personal Electronic Dosimeter

Precise radiation measuring instrument for reliable detection and registration of radiation in order to ensure the personal safety of the user. Suitable for a broad range of everyday radiation monitoring purposes in stand alone conditions



- Enhanced EMI immunity
- Rugged clip fixing
- Improved wear-out and decontamination properties
- Increased sound pressure
- Individual Personal Alarming Dosimeter
- Digital display for integrated dose or alternatively dose rate
- User selectable alarm levels for both dose and dose rate
- Detects Gamma and X-rays
- Energy Compensated Si-Diode Detector
- Measurement Range:
 - Dose: 1 μ Sv- 9.99 Sv or 0.1 mrem-999 rem
 - Dose rate: 5 μ Sv/h- 3 Sv/h or 0.5 mrem/h- 300 rem/h
- Calibration: better than $\pm 5\%$ (Cs-137, 662 keV at 2 mSv/h), Hp(10)
- Energy response: Hp(10), 60 keV- 3 MeV, better than $\pm 25\%$, up to 6 MeV, better than $\pm 35\%$
- Dose rate linearity: better than $\pm 15\%$, up to 3 Sv/h (300rem/h)
- Reader Communication: by infrared through bottom part; by using ADR-1 Reader Head in combination with RADOS PC software
- Audible alarms:
 - Eight separate alarms, sound level typically better than 85 dBA at 30 cm
 - Integrated dose
 - Dose rate
 - Dose overflow
 - Dose rate overflow at 3 Sv/h or 300 rem/h
 - Low battery 1 and 2
 - Defect
- Alarm thresholds: seven preset values for each integrated dose and dose rate, manually selectable by push-button
- Push-button functions:
 - front panel push-button has the following selectable functions:
 - toggle between dose and dose rate display
 - switch ON/OFF
 - chirp ON/OFF
 - reset integrated dose
 - change alarm thresholds
 - activate battery test
- Dimensions: 3.07" x 2.63" x .86"
- Temperature Range: -4° - 122° F
- Weight: 2.82 oz
- Power supply: one AAA alkaline cell, life typically 1800 h in background field (dose mode)

RAD-60 Personal Electronic Dosimeter

DMC-3000 Personal Electronic Dosimeter



- Loud alarm, 85 dB (A) typical, (> 90dB (C) peak)
- Vibrating alarm
- Highly visible backlit display
- Optional telemetry module
- Simple 2-button navigation
- Extended dose rate alarms
- Dual ultrabright LED alarm
- Superior X-ray and gamma energy response
- Meets or exceeds applicable IEC and ANSI standards
- Designed for ruggedness and durability

Physical Characteristics:

- Compliant with IEC 61526Ed. 3, ANSI 42.20 (*)/
- (*) isotropy ^{241}Am and ^{137}Cs with $\pm 75^\circ$ angle
- **Measurement and display:** X and gamma energy range: 15 keV to 7 MeV; Energy response better than $\pm 20\%$ (typically $\pm 10\%$) from 16 keV to 7MeV
- **Accuracy Hp(10):** $\leq \pm 10\%$ * (^{137}Cs , ~ 24 mSv/h); $\leq \pm 15\%$ *, (^{241}Am , ~ 23 mSv/h); $\leq \pm 19\%$ **X-ray 16 keV (*including $\pm 5\%$ extended uncertainty $k=2$); (** including $\pm 9\%$ extended uncertainty $k=2$)
- **Display units:** mSv, μSv , or mrem
- **Display dose:** 1 μSv to 10 Sv (0.1 mrem to 1000 rem)
- **Display rate:** 10 $\mu\text{Sv/h}$ to 10 Sv/h (1 mrem/h to 1000 rem/h) or 1 $\mu\text{Sv/h}$ to 10 Sv/h (0.1 mrem/h to 1000 rem/h) extended option
- **Measurement range:** 1 μSv to 10 Sv (0.1 mrem to 1000 rem) 0.1 $\mu\text{Sv/h}$ to 20 Sv/h (0.01 mrem/h to 2000 rem/h); Saturation indication above 10 Sv (1000 rem) or 10 Sv/h (1000 rem/h)
- **Dose Rate Linearity:** $< \pm 20\%$ up to 10 Sv/h (1000 rem/h) (Co and X H30 20 keV) $< \pm 20\%$ up to 6 Sv/h (600 rem/h) (Pulsed X-rays 20 ms width, 1, 10 & 20 pps)

Electrical Characteristics:

- Standard AAA (LR03) 1.5 V Alkaline battery
- 9 calendar month battery life (typically, 8 h per day, 5 days per week in run mode, without excessive alarms)
- 2500 h battery life in continuous run, without excessive alarm* (*0.2% of the time in alarm)

Mechanical Characteristics:

- Rugged, high impact polycarbonate- ABS case
- Dimensions: 3.4" x 2.2" x .08" without clip
- Weight with alkaline battery and clip: 3.1 oz
- Worn by replaceable clips (2 different style back clips or one front-facing clip for DMC worn inside the pocket)

Alarm Features and Communication

- Alarming speaker with level of 85 dB (A) typical (>90 dB (C) peak) at 30 cm (11.8 in), frequency <4800 Hz
- Vibrating alarm
- High efficiency red flash LED on front
- 3 Top LED's and display indicators
- Dose/rate alarms, adjustable over the display range
- Dose/rate warnings, adjustable over the display range and acknowledgeable
- Remaining time before alarm and run time alarms
- Hands-free communication, frequency: 125 kHz
- Backward compatibility with existing readers (LDM 2000, LDC 220/210)
- Range of communication with LDM 220: 10 cm (3.9 in)

DMC-3000 Personal Electronic Dosimeter

RadTarge II Personal Dosimeter

Digital Data Acquisition

- All Digital solid-state detection
- High-performance YSO crystal
- Miniaturized SiPM

High Performance Detection Design

- High-speed chip enables fast response and the smallest dead time in industry
- Patented MVT digital signal processing technology provides excellent performance and stability
- Background radiation interference virtually eliminated

Rapid Response

- Full-range reading and alarm response in less than 8 seconds
- Higher sensitivity allows for earlier detection
- Audible output quickly alerts responders of rapidly changing radiation levels
- Real-time, active self-reading
- Auto-calibration
- Virtual elimination of false alarms
- Ability to discriminate between background radiation and man-made source
- Programmable chips enable firmware updates and system upgrades

Quality Control System

- Ultra-low power consumption
- High system stability and reliability
- Accurate and reliable data
- Precise quantitative analysis



Technical Specifications

Detector	YSO Scintillator + SiPM
Type of Radiation Detected	Gamma, X-Ray
Energy Range	30 keV–1.5 MeV
Dose Rate Range	50 μ rem/h–500 mrem/h (0.50 μ Sv/h–5 mSv/h)
Integrated Dose Range	1 μ rem–10,000 rem (0.01 μ Sv–100 Sv)
Sensitivity	90 cps/mrem/h (9 cps/ μ Sv/h) (Cs-137)
Energy Response	$\leq \pm 40\%$ (Cs-137)
Dose Rate Linearity	$\leq 10\%$ up to 500 mrem/h (5 mSv/h)
Accuracy	$\pm 5\%$ (Cs-137)
Alarm Threshold	User-Set Values for Dose Rate: 100 μ rem/h–500 mrem/h (1 μ Sv/h–5 mSv/h)
Alert Options	Audible (80 dB at 12 in/30 cm), Visual (LED and Display), Vibrating
Overload Display	Activation When > 100 mrem/h (1 mSv/h), Overload Indication up to 1,000 rem/h (10 Sv/h)
Communications	MicroUSB, Software (RadSuite-Dose)
Ergonomics	Upward-Facing, Tilted Screen
Power Supply	Rechargeable Lithium-Ion Battery
Battery Life	Typically 200 h in Background Field
Display	Backlit LCD
Weight	2.1 oz (60 g)
Dimensions	2.7 x 1.8 x 0.7 in (69 x 46 x 17 mm)
Accessories	MicroUSB Cable
Operating Temperature	32–122 °F (0–50 °C)
Storage/Transport Temperature	–4–158 °F (–20–70 °C)
Relative Humidity	Up to 90% RH (Non-Condensing)
IP Rating	IP65
EMI/EMC	Exceeds IEC 61526 Requirements
FCC ID	2AC7P-110

RT-II

RadTarge II Personal Dosimeter

Radiopharmaceutical Tec-Control Chromatography System



Chromatography Strips

- 150-001** Red Strips, 50/pkg
- 150-005** Black Strips, 50/pkg
- 150-025** Yellow Strips, 50/pkg
- 150-122** Orange Strips, 50/pkg
- 150-125** Light Blue Strips, 50/pkg
- 150-127** Green Strips, 50/pkg
- 150-130** Gold Strips, 50/pkg
- 150-771** Dark Green Strips, 50/pkg
- 150-772** Blue Strips, 50/pkg
- 150-951** Lime Strips, 50/pkg
- 150-952** Peach Strips, 50/pkg
- 150-971** Teal Strips, 50/pkg
- 150-991** Pink Strips, 50/pkg
- 150-782** Aluminum Strips, 50/pkg

Chromatography Solvents

- 150-160** 20% Sodium Chloride, Solvent 30 ml
- 150-773** DTPA Solvent, 5 ml
- 150-781** Aluminum Standard, 5 ml 10 µg/ml
- 150-783** Aluminum Standard, 5 ml 5 µg/ml

Related Items:

- 150-960** Developing Vials, 10 ml, 288 case (used for all Tec-Control testing)
- 150-961** Developing Vials, 5 ml, 144/case (used for Sestamibi & Tetrofosmin)
- 066-533** Curved Locking Forceps, 9.5" L
- 066-535** Straight Locking Forceps, 9.5" L
- NMC-536** Curved Non-Locking Forceps, 12.5" L

RADIOPHARMACEUTICAL	SOLVENT(S) REQUIRED*	STRIPS REQUIRED
Aluminum Breakthru	150-781 10 µg/ml	150-782
Aluminum Breakthru	150-783 5 µg/ml	150-782
Bicisate (Neurolite™)	Ethyl Acetate 99.9%	150-130
Diphosphonate	Acetone (HPLC Grade), Distilled H ₂ O	150-001 & 150-005
Disofenin (Hepatolite™)	150-160, Distilled H ₂ O	150-122 & 150-125
DMSA	Acetone (HPLC Grade),	150-025
DTPA	Acetone (HPLC Grade), Distilled H ₂ O	150-001 & 150-005
Exametazine (Ceretek™)	Ethyl Acetate 99.9%	150-130
Fluorodeoxyglucose (FDG)	Acetone (HPLC Grade)	150-127
Glucoheptonate	Acetone (HPLC Grade), Distilled H ₂ O	150-001 & 150-005
HDP	Acetone (HPLC Grade), Distilled H ₂ O	150-001 & 150-005
MAA	Acetone (HPLC Grade),	150-001
MAG3 (Mertiatide™)	Acetone, (HPLC Grade), Chloroform 99.8% Tetrahydrofuran 99+%	150-951 & 150-952
MDP	Acetone (HPLC Grade), Distilled H ₂ O	150-001 & 150-005
Mebrofenin (Cholotec™)	150-160, Distilled H ₂ O	150-122 & 150-125
Pyrophosphate	Acetone (HPLC Grade), Distilled H ₂ O	150-001 & 150-005
Sestamibi (Cardiolite™ and Miraluma™)	Ethyl Acetate 99.9%	150-991
Sulphur Colloid	Acetone (HPLC Grade)	150-001
Tc-99m (reduced)	Acetone (HPLC Grade),	150-001
Tc-99m Monoclonal Antibodies	0.9% Saline	150-771
Tetrofosmin (Myoview™)	Ethyl Acetate 99.9%	150-971
In-111 Octreotide (Octreoscan™)	150-773 & 0.9% Saline	150-771 **
In-111 Monoclonal Antibodies	150-773 & 0.9% Saline	150-771 **
In-111/Y-90 Zevalin™	0.9% Saline	150-772
I-131 Monoclonal Antibodies and Neutrospec™	0.9% Saline	150-771
* See Sigma-Aldrich product matrix for solvents		
** Note: A Well Plate is suggested to perform QC on these radiopharmaceutical. Contact Fisher Scientific Corp. 800-766-7000/ www.fishersci.com/ Item# 14-245-71		

Tec-Control Solvent Vendor: Sigma-Aldrich Chemical Company 800-558-9160/ www.sigmaaldrich.com	
Note: Customers outside the US should visit the website to locate a regional office.	
Solvent Description	Vendor Part#
Acetone HPLC Grade	27072-5
Ethyl Acetate 99.5% ACS Reagent	31990-2
Chloroform 99.8% ACS Reagent	31998-8
Tetrahydrofuran 99+% ACS Reagent	36058-9

Aluminum Breakthru Kit

- The Aluminum Breakthru Kit provides a rapid, easy and inexpensive way to test aqueous solutions, particularly pertechnetate generator eluate, for trace quantities of aluminum.
- Aluminium forms an intense red precipitate with the indicator paper, and the intensity of the color is directly proportional to the amount of aluminum in the solution.
- The USP allows a concentration of aluminum ion in an injection ≤ 10 micrograms per milliliter ($10 \mu\text{g/ml}$) in technetium 99m eluate prepared from Molybdenum 99 formed as a result of uranium fission.



Simple 3 step procedure:

1. Place a drop of the eluate or solution to be tested on the indicator paper. The best procedure is to form a hanging drop using a 19-22G needle
2. Place a drop of the standard aluminum solution on the indicator paper. Use the same size drop.
3. Compare the intensity of the red spot formed. If the eluate spot is less intense than the standard solution, the eluate contains less than $10 \mu\text{g/ml}$ aluminum.

150-780

Aluminum Breakthru Kit

*Includes: Aluminum Standard, 5 ml, $10 \mu\text{g/ml}$,
50 indicator strips and manual*

150-785

Aluminum Breakthru Kit

*Includes: Aluminum Standard, 5 ml, $5 \mu\text{g/ml}$,
50 indicator strips and manual*

Nuclear Medicine Procedure Manual

Contents Overview

General Policies:

- Performing a Study
- Department Guidelines & Safety Policies
- Quality Control/ Assurance of Instrumentation
- Laboratory and Radiochemistry Procedures
- Regulatory Agencies

Therapeutic Procedures:

- Endocrine System
- Hematologic System
- Tumor
- Skeletal System

Diagnostic Procedures:

- Cardiovascular System
- Central Nervous System
- Endocrine System
- Gastrointestinal System
- Genitourinary System
- Hematologic System
- Infection Imaging
- Pulmonary System
- Skeletal System
- Tumor Imaging

Radiopharmacy

Appendices

Written by experienced nuclear medicine professionals

- DaTScan for dopamine transporter imaging
- Parathyroid imaging: Dual tracer, simultaneous acquisition with SPECT-CT
- The perfect companion to any nuclear medicine textbook
- Evidence based protocols, over 250 important new references

Disc format in: Microsoft Word/ Mac & PC

Adobe PDF/ Mac & PC

Apple Pages/ Mac

067-935 Disc Format, Nuclear Med. Procedure Manual

Call Pinestar toll-free 1-800-682-2226, to place an order

Plastic Warning Signs



10" x 7"
024-900



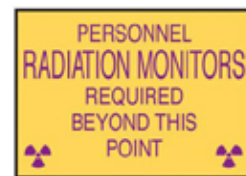
10" x 7"
024-923



10" x 7"
024-999



14" x 10"
024-914



14" x 10"
024-957



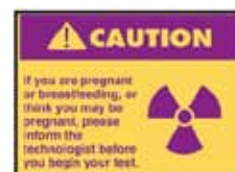
Aluminum Sign
AS2014 20" x 14"
AS2820 28" x 20"



14" x 10"
024-910



14" x 10"
024-911



14" x 10"
024-916

Cardboard Warning Signs

Black on Yellow



8" x 10", 10/pkg
025-001



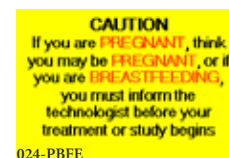
8" x 10", 10/pkg
025-002



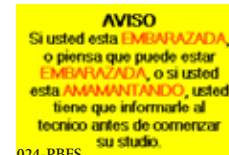
8" x 10", 10/pkg
025-003



8" x 10", 10/pkg
025-004



024-PBEE



024-PBES

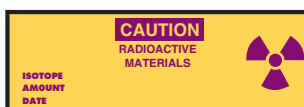
8" x 10", 4/pkg
024-PBFE
024-PBFS

Perforated Warning Tapes

Pressure Sensitive adhesive plastic tape



026-013



026-012



026-005

- 026-013 Radioactive Material, 1" x 3", 180 ft roll
- 026-012 Caution Radioactive Materials, 1" x 2", 180 ft roll
- 026-005 Caution Radioactive Materials 1/2" x 1.38", 180 ft roll
Suitable for test tubes, bottle necks etc.

Pressure Sensitive Warning Labels



028-002



026-015



026-014

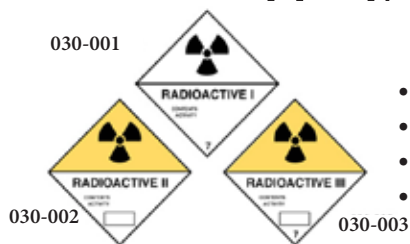
Pressure Sensitive with Peel-off Backing

028-002 Caution Radioactive Material, 5" x 6", 20/pkg

026-015 Radioactive Material, 1" x 3", 500/roll

026-014 Caution Radioactive Material, 1" x 2", 500/roll

Pressure Sensitive Shipping Labels



- Pressure Sensitive
- Peel-off backing
- Package of 20
- 4.25" W x 4.25" H

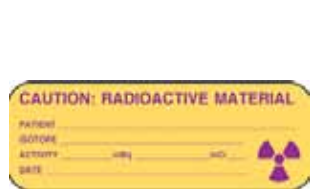
Comply with Federal Regulations, Title 49- Transportation of Hazardous Materials Regulations, Dept. of Transportation, 49CFR, Part 173 as to wording, symbols, size and colors.

030-001 Radioactive I, White, 20/pkg

030-002 Radioactive II, Yellow, 20/pkg

030-003 Radioactive III, Yellow, 20/pkg

Radioactive Warning Labels



026-106



026-108



026-109

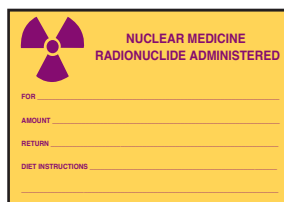
026-106 Caution Radioactive Material
3" W x .875" H, 320 labels per roll

026-109 Radioactive Waste Label
4" W x 2.63" H, 240 labels per roll

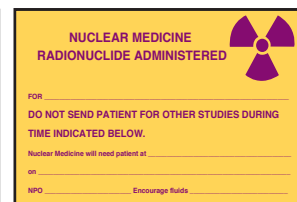
026-108 Radioactive Waste Label
2" W x 3" H, 320 labels per roll

Nuclear Medicine Labels

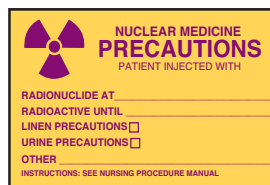
Magenta ink on yellow background



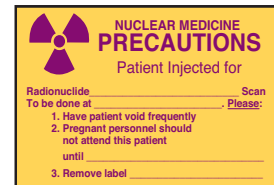
026-100



026-101



129-160



129-161

026-100 Radionuclide Administered Label

200 labels per roll, 4" W x 2.63" H

026-101 Radionuclide Administered Label

200 labels per roll, 4" W x 2.63" H

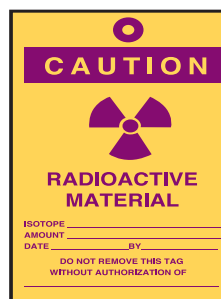
129-160 Patient Injected With Label

320 labels per roll, 3" W x 2" H

129-161 Patient Injected For Label

320 labels per roll, 3" W x 2" H

Pre-Strung Tags



- Extra strength cardboard
- Reinforced string hole
- Package of 100
- 2.63" W x 5.25" H

029-001 Pre-Strung Container Tags, 100/pkg

Warning Rope & Hazard Tape



- Brightly colored- Magenta & Yellow

121-073 Warning Rope, 100 ft /pkg

























Triple Strand polypropylene, .31" Dia

026-020 Hazard Tape, 2" W x 54' L

Constructed of 6 mil. vinyl

Color-Coded Syringe Labels

- Designed to quickly identify radiopharmaceuticals
- 1/2" diameter color coded circles labeled with the pharmaceutical name
- Easily affixed to the plunger top of syringes
- The colors have been selected as a standard most representative of radiopharmaceutical manufacturer's packaging schemes

						
212-001 Purple	212-002 Light Orange	212-003 Yellow	212-004 Olive Green	212-005 Red	212-006 Pantone Purple	212-007 Blue
						
212-008 Orange	212-009 Reflex Blue	212-011 Unmarked	212-012 Brown	212-013 Purple	212-014 White	212-015 Green
						
212-016 Blue	212-017 White	212-019 Pink	212-023 Orange	212-026 Black	212-027 White	212-028 White
			Select item number Roll of 500			
212-030 White	212-031 White	212-032 White				

Syringe Shield Labels

- Simple, practical and organized nuclear medicine record keeping
- 250 labels per roll
- 7/8" x 3"

MDP BONE SCAN

Dose_____mCi Date_____

Pt. Name_____

TI THALLIUM SCAN

Dose_____mCi Date_____

Pt. Name_____

200-L	MDP Bone Scan
201-L	HDP Bone Scan
202-L	PYP Heart Scan
203-L	Tl 201 Thallium Scan
204-L	MAA Lung Scan
205-L	DTPA Lung Scan
206-L	S.C. Liver Scan
207-L	MICROLITE Liver Scan
208-L	DTPA Renal Scan
209-L	GH Renal Scan
210-L	I-131 Hippuran Renal
211-L	HIDA Gall Bladder
212-L	Choltec Gall Gladder
213-L	Galium Scan
214-L	_____Scan
215-L	Cardiolite Heart Scan
216-L	MYOVUE Heart Scan
217-L	MAG3 Renal Scan

Sony Media and Printers

Whether it's paper or film ~ digital, analog or a hybrid of both ~
Sony has a printer for virtually every need and application

B&W Media

UPP-110HA UPP-210HD
UPP-110HD UPP-210SE
UPP-110HG UPP-84HG
UPP-110S UPP-725
UPP-84S

Color Media

UPC-21L UPC-55
UPC-510 UPC-771
UPC-510C UPC-R81MD
UPC-21S UPC-R80MD
UPC-770

Film

UPT-210BL UPT-736BL
UPT-735BL

Contact Us For Printer Information

Codonics

1600P-A

A-CVP

A-DVP

LC-133

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Optical Discs and CD/R

OD-EDM2300C

AK707MMOA

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We Also Offer Mitsubishi Products ~ Contact Us For Information

Eclipse® Probe Cover *Latex-free*



- Soft, latex-free, disposable probe cover for medical ultrasound probes/transducers
- Pre-gelled inside with Aquasonic® 100 Ultrasound Transmission Gel
- Fits most endocavity ultrasound probes
- Size: 1.75" W x 9.5" L
- Latex-free, non-irritating, non-sensitizing, non-sterile
- 100 per box

SterileAquasonic® 100 Ultrasound Transmission Gel



Features:

- 20g overwrapped, sterilized pouches, 48 per box
- Acoustically correct for the broad range of frequencies used in medical ultrasound
- Non-irritating
- Completely aqueous, will not stain clothing or damage equipment

*Other sizes of Aquasonic Gel are available
call us for Pricing*

Gas Lift Lab Stool

Comfortable ♦ Adjustable ♦ Solid Construction



- Backrest & footring included (footring not shown)
- Seat height adjustment: 18.75" to 23.75"
- Seat width: 16"
- 5 star wheel base made of polished aluminum, twin wheel casters
- Weight capacity: 250 lb
- Shipping weight: 24.5 lb
- Many vinyl color choices available

214-115 Gas Lift Lab Stool

Tall Gas Lift Lab Stool

Comfortable ♦ Adjustable to 33.75" ♦ Solid Construction



- Backrest & footring included
- Seat height adjustment: 23.5" to 33.75"
- Seat width: 16"
- 5 star wheel base made of high density plastic, twin wheel casters
- Weight capacity: 250 lb
- Shipping weight: 22 lb
- Many vinyl color choices available

NMC-438 Tall Gas Lift Lab Stool

IV Stand

4 Hook, 5 Leg



- Adjustable from 52 1/2" to 93 1/2"
- 24" Dia. polished die cast aluminum base
- Tru-Loc friction knob
- 2 1/2" twin wheel hooded casters on 5 leg base
- Shipping weight: 13 lb

1315-4 Chrome IV Stand, 4 hook, 5 leg
1315 Chrome IV Stand, 2 hook, 5 leg

IV Stand

2 Hook, 4 Leg



- Adjustable from 51 1/2" to 93"
- 22" Diameter chrome plated base
- Tru-Loc friction knob
- 2" twin wheel hooded casters on 4 leg base
- Shipping weight: 14 lb

214-403 IV Stand, 2 hook, 4 leg

Mayo/Instrument Stand

Stainless Steel Tray



- Stainless Steel Tray 19.25" x 12.62" x .75"
- Two rubber wheel, ball-bearing casters
- Adjustable height: 32" to 50"
- Base: 19" wheels, 21" Dia
- 1" chrome plated steel tubing

214-601 Mayo/Instrument Stand

Mayo/Instrument Stand

Stainless Steel Tray



- Stainless Steel Tray 12 5/8" x 19 1/8"
- Tru-Loc friction knob for manual locking at desired height
- 2" single wheel casters
- Adjustable height: 37 1/4" to 64"

1520 Mayo/Instrument Stand

High Handle Foot Stool



- Lightweight, yet durable foot stool is the safe and easy way for patients to get on or off examination tables
- Steel construction assures a long life
- Rubber caps on the legs & a non-slip surface further assure stability and patient safety
- Shipping Weight: 12 lb
- Patient Capacity: 250 lb

Plastic Utility Cart



- Ergonomically designed handle
- Molded in storage compartments, hooks, holsters
- Large, non-marking casters
- Easy to assemble
- Total holding capacity 500 lb
- Dimensions: 17 7/8" W x 39" L x 33 1/4" H
- Color- Beige
- Shipping weight: 30.6 lb

214-728 High Handle Foot Stool

240-500 Plastic Utility Cart

Collimators

Small Field of View Cameras

- up to 300 mm Dia
- Low Energy Parallel Hole
- Low Energy Div/Con
- Low Energy Pin Hole
- Low Energy 30° Rotating
- Low Energy Recore

Large Field of View Cameras

- up to 400 mm Dia (except Siemens ZLC Cameras)
- Low Energy Parallel Hole
- Medium Energy Parallel Hole
- High Energy Parallel Hole
- Low Energy Pin Hole
- High Energy Pin Hole
- Low Energy Diverging & Converging
- Low Energy 30° Rotating
- Low Energy Recore
- Medium/High Energy Recore

Extra Large Cameras

- i.e. GE Gigacamera, O/N Omega 500
- Low Energy Parallel Hole
 - Medium & High Energy Parallel
 - High Energy Pin Hole
 - Low Energy Recore
 - Medium/High Energy Recore

Siemens ZLC Series Cameras

- Low Energy Parallel Hole
- Medium & High Energy Parallel
- Low Energy Pin Hole
- High Energy Pin Hole
- 30° Rotating
- Low Energy Diverging
- Recores same as 400 mm cameras

See Collimator Protectors
Page 145

Call for Pricing

Wrap-Around Apron



- Designed for front & back protection
- Features extra wide shoulders, distributing weight over a greater area to reduce fatigue.
- Three panel hook & loop fastener
- Shoulder pads included
- Standard Protection: 0.5 mm Pb Equiv. Front (1.0 mm overlap), 0.3 mm Pb Back
- Chest Size: 42" - 45"
- Waist Size: 35" - 39"
- Hips up to: 47"
- Front Length: 34"
- **Optional TL Lite Ply**

103-336 Wrap-Around Apron, Unisex

TL Lite Ply Option

20% lighter than regular lead.

Standard Coat Apron



- Features open back with choice of closure
- 3 closure options: Ties, Hook & Loop, Quick Release buckle
- Shoulder pads included
- Standard Protection: 0.5 mm Pb Equiv.
- Chest Size: 42" - 46"
- Front Length: 36"
- **Optional TL Lite Ply**

103-701 Standard Coat Apron, Unisex

TL Lite Ply Option

20% lighter than regular lead.

Vest/Skirt Combo



- Vest features all around protection with overlap in the front, shoulder pads and three panel hook and loop closure
- Skirt wraps around and overlaps in the front offering extra protection.
- Skirt fits securely on hips with extra wide hook and loop fastener and quick release buckle for added support
- Standard Protection:
 - Vest: 0.5 mm Pb Front (overlaps to 1.0 mm)/ 0.3 mm Pb Equiv. Back
 - Skirt: 0.3 mm Pb Front (overlaps to 0.6 mm)/ 0.3 mm Pb Equiv. Back
- Will adapt for Pregnancy, call for details
- **Optional TL Lite Ply**

Vest/Skirt Combo

- 103-800** Unisex, Small,
Chest 34" -37", Waist 27" -31", Hips 39"
- 103-801** Unisex, Medium
Chest 38" - 41", Waist 31" - 35", Hips 43"
- 103-802** Unisex, Large
Chest 42" -45", Waist 35" -39", Hips 47"
- 103-803** Unisex, X-Large
Chest 46" -49", Waist 39" -43", Hips 51"

TL Lite Ply Option

20% lighter than regular lead.

Half Aprons



- Designed for front or back protection
- Available with your choice of closure; Tie, Quick Release Buckle or Hook and Loop Closure
- Standard Protection: 0.5 mm Pb Equiv.
- Available in Child and Adult sizes
- **Optional TL Lite Ply**

- 801** Adult Large, 24" W x 24" L
- 802** Adult Medium, 24" W x 20" L
- 803** Adult Small, 18" W x 16" L
- 804** Child, 10" W x 10" L

TL Lite Ply Option

20% lighter than regular lead.

Portable Shield



- Ideal for patient protection during diagnostic procedures
- Adjustable height form 36" to 60"
- Sturdy five leg base for stable mobility
- Royal blue nylon
- Standard Protection: 0.5 mm Pb Equiv.

1001 Porta-Shield, 24" W x 24" L

Thyroid Collars



- Soft and flexible while offering the best of comfort without binding
- Rear hook & loop closure
- Standard Protection: 0.5 mm Pb Equiv.

- 621US** Thyroid Collar, 24" L
- 621UL** Thyroid Collar, 26.5" L

Gonadal & Ovarian Shielding

Standard Protection: 0.5 mm Pb Equivalency
Color is subject to change

Gonad shields are available with or without optional ties, hook & loop closure or quick release buckle.



Set of 3 includes one of each:
 3" x 5", 6" x 7", 7" x 9"

PTI-GS Gonadal Shields

Features four attachable gonad shields in assorted sizes that interchange to one hook and loop belt.



Set of 4 includes one of each:
 6" x 7", 7" x 9" and two 3" x 5"

PTI-GOSS Gonadal Ovarian Belt System

- Holds 1-4 Aprons
- 24" x 4"
- Weight 3 lb

Peg Apron Rack

Model 813 Peg Apron Rack



Porta-Rak

- Holds up to 8 aprons
- Designed for where space is at a premium
- Sturdy aluminum five leg base with nylon casters
- Uses only 24" of floor space
- 24" W x 50" H
- Weight 29 lb



Model 817 Porta-Rak

Radiation Resistant Gloves



- Lead free
- Non latex
- Excellent flexibility, dexterity and touch sensitivity
- .23 mm thickness

ASG6.5	Size 6 1/2
ASG7	Size 7
ASG7.5	Size 7 1/2
ASG8	Size 8
ASG8.5	Size 8 1/2
ASG9	Size 9

Shielded Eyeglasses

Protect your eyes with quality craftsmanship

Standard Metal



- Constructed of optical steel base metal with gold electro-plate
- Includes adjustable non-slip silicone nose pads
- 0.75 mm Equiv. Optical Lead Glass
- Side shields included

Model 50 Non prescription

Ultra Flex



- Advanced nylon composite frame
- Uni-fit ear and nose pieces
- 0.75 mm Equiv. Optical Lead Glass
- Side shields included
- Color: Silver

Model 98UFS Non prescription

Wrap Around



- Features comfortable molded wrap styling in durable tortoise nylon frame
- Uni-fit bridge with leaded side shields
- 0.75 mm Equiv. Optical Lead Glass
- Color: tortoise

Model 53 Non prescription

Call Pinestar toll-free 1-800-682-2226, to place an order

Bind-It™

Designed for Nuclear Medicine

The Next Generation of Radioactive Decontaminants

Reasons to use Bind-It Decontaminant Hand Soap every time you wash your hands:

- Will not dry your hands like ordinary lab soap
- Fresh, clean scent
- Economical & convenient
- Touch-free wall mount dispenser
- Meets the intent of ALARA
- Removes contamination every time you wash

When you use Bind-It Decontaminant Spray the difference is clear:

- Will NOT cloud lead glass
- Safely decontaminate Syringe Shields & L-Blocks
- Removes dirt, dust, oils and grease as well as Radioactive Contamination
- Used regularly it provides a protective barrier that aids in subsequent cleanup
- Very mild, pleasant scent



LTI051



LTI047



LTI030

LTI051 Bind-It Decontamination Introductory Kit
(1) Touch-free dispenser
(1) Bind-It Hand Soap- 32 oz bottle
(1) Bind-It Decontaminant Spray- 32 oz bottle

LTI047 Bind-It Decontaminant Hand Soap- 32 oz, Case of 12
Qty 6-11
Qty 1-5

LTI030 Bind-It Decontaminant Spray Cleaner- 32 oz, Case of 12
Qty 6-11
Qty 1-5



The Bind-It Patient Care Pack comes complete with everything the patient will need for 1-2 weeks of use, depending on the size of the patient's isolation area

- The 8oz Hand Soap will accommodate many hand washings over the course of the patient's post treatment period and can be used in the shower.
- The Ready-To-Use Spray is ready to use on the bathroom sink, bathtub/shower and floor.
- The Concentrate is ideal for cleaning the sink, bathtub/shower and toilet bowl (the largest typical point of contamination).

LTIHCP Bind-It Patient Care Pack
Includes: (2) 8oz bottle of Hand Soap
(1) 32oz bottle of Ready-To-Use Spray
(1) 8 oz bottle of Concentrate

Radiacwash™



Formulated to decontaminate the widest possible range of contamination from radioisotopes and fission products, without affecting surfaces as acids and reagents do.

005-100 Radiacwash 1 gal bottle

005-400 Radiacwash Spray Mist, 1 liter
Includes: Special high pressure mist applicator



Radiacwash™ Towelettes



Individually packaged paper towels saturated in a special radiacwash solution. Simply remove the towelette from the foil packet, scrub hands thoroughly and wash contamination away with running water.

005-300 Radiacwash Towelettes, 100/bx

Wipe Test Smears



- Sample any surface contaminated with radioactivity
- Convenient, easy-to-use cloth discs with individual record folders

006-350 Wipe Test Smears, 500/bx
Includes 500 wipes & 500 record folders

Forceps

- Forceps are made of surgical grade steel
- Forceps are excellent for handling small items in the hot lab
- No need to physically touch vials, ampules etc.

066-533 **Curved Locking Forceps, 9.5" L**
066-535 **Straight Locking Forceps, 9.5" L**
NMC-536 **Curved Non-locking Forceps 12.5"**



Niptongs

- Niptongs are made of chrome-plated high carbon steel with hardwood handles
- Forceps are excellent for handling small items in the hot lab
- No need to physically touch vials, ampules etc.

011-012 **Niptongs, 12"**
011-036 **Niptongs, 36"**



Absorbent Paper

- Highly absorbent with plastic lining for fast, safe clean up
- Available by the roll (shown) or in pre-cut sheets

033-300 **Absorbent Paper Roll**
 1 Roll - 300' L x 20" W
033-304 **Absorbent Paper Roll**
 2 Rolls -300' L x 20" W
033-013 **Absorbent Sheets, 50/bx**
 13" W x 17" L
046-275 **Wall Mount Dispenser**
 for 033-300/003-304



Decontamination Kit



The essentials for decontamination:

- 1 30 gallon Fiber Drum (20" Dia x 29.5" H)
- 2 pr Disposable Coverall
- 2 pr Disposable Shoe Covers
- 2 Respirators
- 4 Filters
- 2 pr Reusable Gloves
- 1 gal Radiacwash
- 1 bx Radiacwash Towelettes
- 1 ltr Radiacwash Spray Mist
- 10 Poly Bags
- 1 12" Niptong
- 1 ea Sponge, Mop, Scrub Brush, Pail, Rope,

121-180 Decontamination Kit
Shipping Weight: 40 lb



Minor Emergency Spill Kit



Kit contents are packaged in translucent yellow tint 4 mil plastic liner. Includes Emergency Procedures and forms to document a spill and decontamination efforts.

- 6 pr Disposable Gloves
- 1 pr Housekeeping gloves
- 2 Disposable Lab Coats
- 2 Paper Hats
- 2 pr Disposable Shoe Covers
- 1 roll Absorbent Paper w/ plastic backing
- 6 Yellow Plastic Bag Liners w/ twist ties
- 1 roll "Caution Radioactive" Tape
- 1 Pencil
- 1 Black Pen
- 3 Pre-strung Tags "Caution Radioactive Material"
- 10 Supplies for contamination smears samples
- 1 Clear Clipboard
- 1 Instruction for "Emergency Procedures"

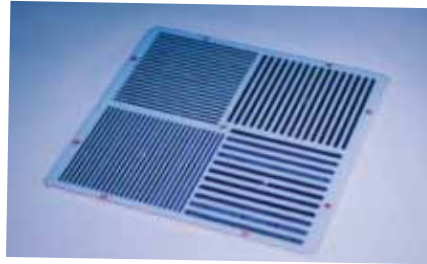
0601-0009 Minor Emergency Spill Kit
Shipping Weight: 6 lb

Collimator Protectors

- 114-177** Collimator Protectors, 250/roll
17" x 17"
- 114-017** Wall Mount Dispenser

Bar Phantoms

Four-quadrant bar phantoms offer precise determination of camera intrinsic resolution, collimator spatial resolution, field size and linearity.



Rectangular Bar Phantom

Dimensions: 22.25" L x 17" W x .5" H
Lead Bar Widths: .079", .098", .118" and .138" (2, 2.5, 3 and 3.5 mm)
Field Across Bar Configuration: 21" L x 15.9" W
Shipping Weight: 21 lb

243-935 Rectangular Bar Phantom

Standard High Resolution Bar Phantom

Dimensions: 16.875" L x 16.875" W x .5" H
Lead Bar Widths: .25", .187", .156" and .125" (6.4, 4.8, 4 and 3.2 mm)
Field Across Bar Configuration: 15.875" L x 15.875" W
Shipping Weight: 14 lb

243-800 Standard High Resolution Bar Phantom

Symbia and E-CAM Bar Phantom

Includes two removable screw knobs for insertion/removal of phantom from camera head.

Dimensions: 16" L x 21.4" x .5" H
Lead Bar Widths: .079", .098", .118" and .138" (2, 2.5, 3 and 3.5 mm)
Field Across Bar Configuration: 20.3" L x 14.875" W
Shipping Weight: 19 lb

243-986 Symbia and E-CAM Bar Phantom

Cardiac Bar Phantom

Dimensions: 15.5" L x 9.25" W x .5" H
Lead Bar Widths: .079", .098", .118" and .138" (2, 2.5, 3 and 3.5 mm)
Field Across Bar Configuration: 14.5" L x 8.25" W
Shipping Weight: 15 lb

243-955 Cardiac High Resolution Bar Phantom

Fillable Rectangular Flood Phantom

Our fillable flood phantoms feature extra strength side walls and clear Lucite for easy positioning. Easy to fill and easy to drain, the phantoms are leak proof and are excellent for transmission imaging.

043-054 Rectangular Flood Phantom
Dimensions: 20.5" x 28" x 1.25"
Cavity: 16.5" x 24" x .5"
Filled in the vertical position



76-801 Rectangular Flood Phantom
Dimensions: 18" x 23" x 1"
Cavity: 16" x 21" x .5"
Weight: 10 lb
Filled lying flat



NMC-76801 Jumbo Flood Phantom
Dimensions: 20.5" x 28" x 1.25"
Cavity: 18.5" x 26" x .5"
Filled lying flat

Flood Phantom Funnel

Screws directly into the flood phantom for safe, easy, fast filling

131-010 Flood Phantom Funnel



Thyroid Uptake Neck Phantom

Designed to simulate a patient's neck. The phantom is constructed of lucite. It has a two part insert that allows counting from a bottle, vial or capsule. A capsule holder is supplied to enable the user to count capsules directly, without having to dissolve them. The phantom's cylinder and carrier have scribelines for accurate alignment. A flat surface on the cylinder allows either vertical or horizontal positioning. Twelve 30 ml bottles are included with the phantom.

Proposed by the International Atomic Energy Agency (I.A.E.A.) and the American National Standards Institute

Dimensions: 5" H x 5" Dia
I.D: 4" H x 2" Dia



043-365 Thyroid Uptake Neck Phantom
Includes: bottle carrier, capsule holder and 12 polyethylene bottles

043-361 Polyethylene Bottles, 30 ml, 50/pkg

PTI-PC Phantom Cradle

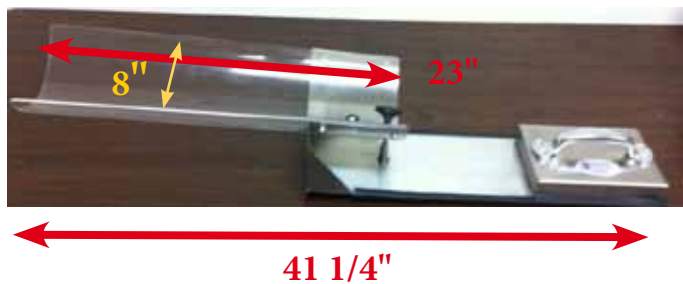
The ACR SPECT QC phantom cradle supports the Data Spectrum Flangeless SPECT phantom. Constructed with a low density foam which supports a phantom 20cm diameter by 25cm long. Simplifies positioning, transporting and storing phantoms. Enables minimal scanning radius with non-circular orbits for SPECT QC testing.



PTI-PC Cradle for ECT/PET Phantom

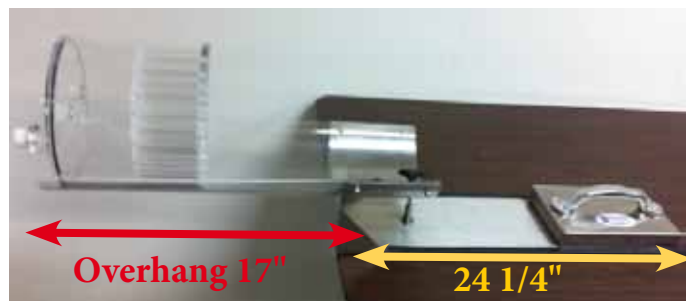
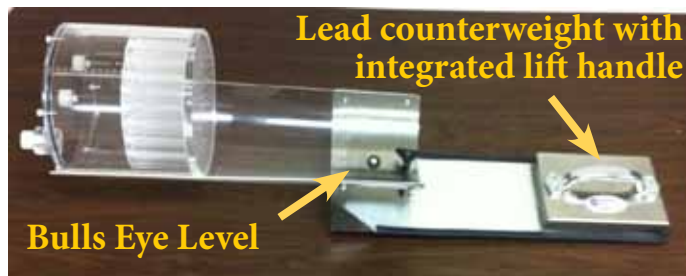
PTI-PC Cradle for ECT/PET Phantom

- Unique foam cradle design
- For carry and setup purposes
- Tape no longer necessary
- Phantom supported just millimeters off the table
- Ideal for non-circular orbits
- Quick phantom setup and positioning
- Lower personnel exposure with quick setups



PH-1 QC Phantom Holder

- Durable stainless steel construction
- Adjustable phantom support platform with bulls eye level ensure fast easy leveling
- Integrated table stop ensures the holder and the phantom are square to the imaging table
- The end position of the phantom provides necessary clearance for imaging detector rotation
- Easy to clean and totally non-absorbent
- Compatible with the ACR Flangeless Deluxe Jaszczak Phantom or phantoms with a similar radius design
- Includes built-in lead counterweight for secure cantilevered style positioning of the Phantom



Specifications: 41 1/4" L x 8" W x 6.5" H
Weight: 34 lb

PH-1 Single/ Dual Head QC Phantom Holder

Jaszczak Flangeless Deluxe SPECT Phantom

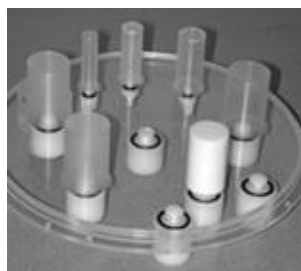
Esser Flangeless Deluxe PET Phantom



043-765



043-772 Designed for PET



2nd Deluxe Flangeless Lid

Our Custom Lead-Lined Storage Boxes Are A Great Option For Storage Of Your Data Spectrum SPECT or PET Phantom
See page 65

The Flangeless SPECT Phantom and the Flangeless PET Phantom meet the requirements set by ACR. The appropriate phantoms provide consistent performance information for any SPECT or PET system. The small SPECT Phantom is an ACR recommended phantom for small field of view dedicated cardiac SPECT systems. Multiple performance characteristics of camera-based SPECT systems are evaluated from a single scan of the phantom.

On-axis and off-axis transverse line spread function may be easily measured without removing the cover plate. Measurements of full-width-half (or tenth) maximum can be readily determined, either in air or in water.

The Flangeless SPECT Phantom is used for high resolution cameras, complying to the ACR requirements.

043-765 Flangeless Deluxe Phantom:

Cylinder Interior Dim.: 8.0" Dia x 7.3" H
Cylinder wall thickness: 6.4mm
Cold Rod Insert Height: 3.46" H
Cold Rod Dia: 4.8, 6.4, 7.9, 9.5, 11.1, 12.7 mm
Height of Spheres from Base Plate: 5" H
Solid Sphere Dia: 9.5, 12.7, 15.9, 19.1, 25.4, 31.8 mm

043-759 Flangeless SPECT Phantom, Small

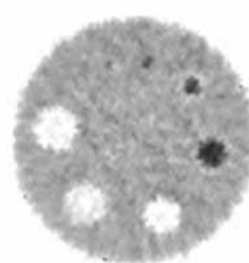
Cylinder Interior Dim.: 5.5" Dia x 5.9" H
Cylinder wall thickness: .64 cm
Cold Rod Insert Height: 1.57" H
Cold Rod Dia: 3.2, 4.8, 9.5, 11.1 mm
Height of Spheres from Base Plate: 3.1" H
Solid Sphere Dia: 3.2, 4.8, 9.5, 12.7, 15.9, 19.1 mm

043-772 Esser Flangeless PET Phantom:

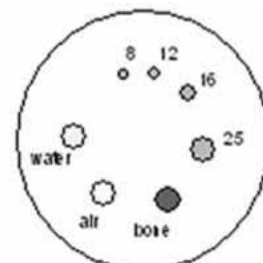
Cylinder Interior Dim.: 8.0" Dia x 7.3" H
Cylinder wall thickness: 6.4 mm
Cold Rod Insert Height: 3.46" H
Cold Rod Dia: 4.8, 6.4, 7.9, 9.5, 11.1, 12.7 mm
Height of Spheres from Base Plate: 5" H
Solid Sphere Dia: 9.5, 12.7, 15.9, 19.1, 25.4, 31.8 mm

Specifications of PET Phantom Lid™

Refillable thin-walled cylinders: 4, 6, 8, 12, 16, (x3) mm
Solid cylinder (Teflon®): 16 mm bone equivalent
Cylinder height: 1.5"
Lid Closure: Bayonet-Style with Lock Screw



Pet Phantom Lid
Image



Pet Phantom Lid
Diagram

- 043-765 Flangeless Deluxe SPECT Phantom, ACR
- 043-759 Flangeless SPECT Phantom, **Small**, ACR
- 043-772 Esser Flangeless PET Phantom, ACR
- 043-772-2 Esser Flangeless PET Phantom, with 2nd Deluxe Flangeless Lid for SPECT, ACR

- 043-777 Cardiac Phantom Insert
Includes Defect Set (call for specifications)



043-777

PET-CT Phantom™



The PET-CT Phantom™ includes internal structures (3 rods and 6 spheres) which, when imaged with both modalities, can demonstrate how accurately the two image sets are aligned.

Main Cylinder: Interior length of phantom: 18 cm
 Fillable spheres (5) inner dia: 10, 13, 17, 22, 28 mm
 Distance from sphere plane to inside wall: 7cm
 Volume of empty cylinder: ~9.7 liters

Main Cylindrical insert dims: O.D.: 5.1 cm
 Length: 18 cm
Top Cylinder: O.D. ~ 5.1 cm I.D.: ~ 4 cm
 I.D.: ~ 4 cm

Inside Height: ~ 8.2 cm
 Outside Height: ~ 12 cm
 Volume of empty cylinder: 408 mL

Three Aluminum Tubes:
 One 5 inch long: ~ 1.7 mL
 Two 7 inch (ea): ~ 2.5 mL

Stepped Bone Ring:
 Pre-filled with liquid bone composition, not to be opened.

The volumes for bone ring are:
 Outer volume: ~ 256 mL
 Inner volume: ~ 110 mL

043-771 PET-CT Phantom

NEMA IEC PET Body Phantom Set™



The NEMA IEC Body Phantom Set consists of a body phantom, a lung insert and an insert with six spheres of various sizes. Recommended for use in the evaluation of reconstructed image quality in whole body PET imaging.

Dimensions: 9.5" H x 12" W x 9.5" D
 Interior Length of Phantom: 180 mm
 Fillable Spheres (6) Inner Dia: 10, 13, 17, 22, 28, 37 mm
 Distance from Sphere Plane to Inside Wall: 70 mm
 Volume of empty cylinder: 9.7 L
 Cylindrical Insert Dimension: O.D: 51 mm Dia x 180 mm
 Shipping Weight: 11 lb

043-767 NEMA IEC PET Body Phantom Set

NEMA PET Scatter Phantom™



The NEMA Scatter Phantom is designed to standardize the measurement of count rate performance of a scintillation camera in the presence of scatter. The high density polyethylene cylinder has a fillable line source holder parallel to the center axis of the cylinder.

Outside Diameter: 203 cm
 Length: 70 cm
 Cylinder Hole Size: 6.4 mm
 Cylinder Hole Offset: 4.5 cm
 Line Source Dims: 5 mm O.D. x 80 cm length
 Line Source Inside Dia: 3.2 mm
 Shipping Weight: 52 lb

043-768 NEMA PET Scatter Phantom

NEMA PET Sensitivity Phantom™



The NEMA Sensitivity Phantom consists of 6 concentric aluminum tubes used to detect camera sensitivity in PET.

Five internally stacked concentric aluminum tubes - all 700 mm in length
 1st Tube Inside Dia: 3.9 mm Outside Dia: 6.4 mm
 2nd Tube Inside Dia: 7.0 mm Outside Dia: 9.5 mm
 3rd Tube Inside Dia: 10.2 mm Outside Dia: 12.7 mm
 4th Tube Inside Dia: 13.4 mm Outside Dia: 15.9 mm
 5th Tube Inside Dia: 16.6 mm Outside Dia: 19.1 mm
 6th Innermost Tube, a fillable polyethylene tubing has an inside diameter of 1 mm and an outside diameter of 3 mm
 Shipping weight: 3 lb

043-769 NEMA 2007 PET Sensitivity Phantom

Hollow Sphere Set (6)[™]

- Designed for use in all circular and elliptical ECT cylinders
- Simulates hot and cold spherical "lesions"
- Quantitative evaluation of spatial resolution/object size, attenuation and scatter effects
- Evaluation of quantitative ECT reconstruction methods

Set consists of six hollow spheres - each individually removable and fillable.

Outer diameter: ~11.89, ~14.43, ~17.69, ~21.79, ~26.82, ~33.27 mm

Volume of Spheres: ~0.5, ~1.0, ~2.0, ~4.0, ~8.0 and ~16.0 ml



043-763 Hollow Sphere Set (6)

Micro Hollow Sphere Set (4)[™]

- Simulates small hot or cold spherical "lesions"
- Quantitative evaluation of spatial resolution/ small object size effects
- Evaluation of quantitative ECT reconstruction methods

Set consists of 4 hollow spheres - each individually removable and fillable.

Outer diameter: ~5.94, ~6.95, ~8.23, ~9.86 mm

Volume of Spheres: ~31, ~63, ~125, ~250 μ l



043-764 Micro Hollow Spheres Phantom Insert

Hot Spot Insert[™]

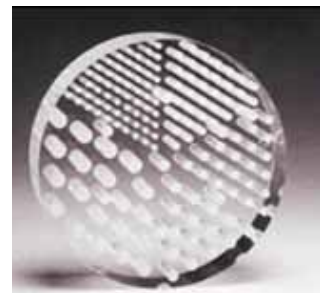
- For use with high spatial resolution SPECT and PET Systems
- System resolution test for high contrast structures
- Acceptance testing
- Routine quality, assurance and control
- System performance evaluation
- Research

Diameter of insert: 20.3 cm

Inside height: 6.6 cm

Diameters of hollow channels: 4.8, 6.4, 7.9, 9.5, 11.1 and 12.7 mm

Center-to-center spacing of channels: Two times the diameter



043-766 Hot Spot Insert (for 043-765)

Capillary Line Fixture[™]

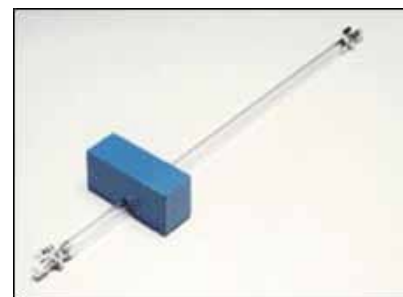
- Center-of-rotation(COR) error measurement for systems that have axially dependent COR correction
- Evaluation of changes of radius-of-rotation on spatial resolution
- Planar and SPECT spatial resolution measurements in air
- Quantitative evaluation of reconstruction filters
- Research

Overall length of line fixture: 55.9 cm

Usable length: 43.2 cm

Outer support tubing: Polycarbonate

Inner diameter of tubing: 1.2 mm



043-718 Capillary Line Fixture

Radioactive Sources

Flood Sources



PET/Spect Sources



Accessory Sources



Vials/Reference

Line Sources



Spot Markers

Auto QC





FeatherLite™ Flood Source

- FeatherLite Co-57 flood sources consist of cobalt chloride uniformly dispersed onto a thin substrate which is then placed in an ABS encapsulation and ultrasonically welded
- FeatherLite is even easier to handle, saving strain on your back
- Manufactured according to the following specifications: $CV \leq 1.0\%$ $INU \leq 3.6\%$
- Many circular and rectangular flood sources are in stock and ready for fast delivery
- Each source is carefully measured for activity and analyzed to ensure a homogenous distribution with a standard deviation of less than 1%
- All sources are shipped with a certificate of calibration that highlights specifications of the flood source
- **Flood Sources are available with or without a Lead Lined Case**
- **Lead Lined Case is sold separately**
- **"Large Field of View" Sources marked with an * are shipped with the new ProKase or Pb Shipper, see page 156 & 157 for more information**

Model#	Active Dimensions	Activity
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***For Millenium MPR, VG & MG, GE Hawkeye, Infinia, Myosite, Philips Argus, Forte, Skylight, Symbia & Siemens E-Cam**

NMC-44-NC	16.5" X 24" rectangle	5 mCi
NMC-45-NC	16.5" X 24" rectangle	10 mCi
NMC-4515-NC	16.5" X 24" rectangle	15 mCi
NMC-46-NC	16.5" X 24" rectangle	20 mCi

ProKase

***For SMV-DST, Multispect 3, Millenium MPS & DSTi/Dsi**

NMC-47-NC	14" X 18" rectangle	5 mCi
NMC-48-NC	14" X 18" rectangle	10 mCi
NMC-49-NC	14" X 18" rectangle	15 mCi
NMC-50-NC	14" X 18" rectangle	20 mCi

ProKase

For CardioMD, Siemens C-Cam, GE Ventri & GE Optima

MED-3727-5-NC	10" X 16" rectangle	5 mCi
MED-3727-7.5-NC	10" X 16" rectangle	7.5 mCi
MED-3727-10-NC	10" X 16" rectangle	10 mCi

Digirad Cardius, Dilon & GVI Clear Vision

MED-3744-5-NC	10" X 10" square	5 mCi
MED-3744-10-NC	10" X 10" square	10 mCi

***For Digirad Ergo**

MED-3745-10-NC	16.6" X 13.2" rectangle	10 mCi
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ProKase

***For GE Starcam XCT, ACT, Adac ARC 3000, Cirrus, Siemens Orbiter**

NMC-29-NC	18.5" round	5 mCi
NMC-30-NC	18.5" round	10 mCi

ProKase

For GE Discovery GE530c, NM/CT570

MED-3743-20-NC	10" X 10" square	20 mCi
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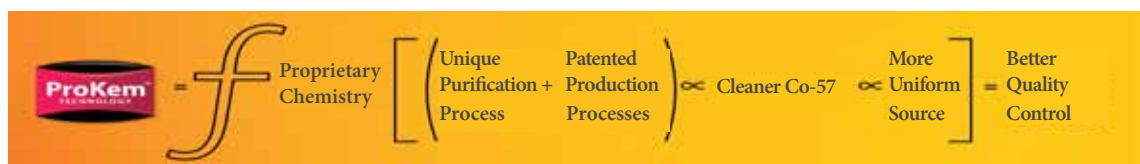
***Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only***

Call Pinestar toll-free 1-800-682-2226, to place an order

Perflexion™ Flexible Co-57 Flood Source



- Perflexion flood source eliminates bulk and weight with its unique flexible design and tungsten composite WolfGuard™ shield
- Perflexion has superior source uniformity, low impurities, and excellent durability
- Perflexion is the world's only flexible flood source
- Perflexion lays flat for calibration use, but rolls into a compact cylinder for storage
- Perflexion provides the most convenient, ergonomic flood source and case with optimum shielding protection
- Perflexion can be folded, bent, crushed and pulled without the material deforming, damaging, creasing, cracking, flaking or tearing over time
- Perflexion polymer "memory" ensures that the source will return to flatness even after being stored in a rolled configuration
- Lightest weight—weighs less than 29 lbs including the tungsten shield and hard case
- Smallest form factor—source rolls to fit in a 6" x 6" x 22" tube for convenient storage
- Best shielding—5-10x better than lead cases
- **Lead Lined Case is sold separately**



Model# **Active Dimensions** **Activity**

Co-57 Flood Source for GVI Clear Vision

PF09R-057-10M-NC 9" X 9" square 10 mCi

Co-57 Flood Source for CardioMD, Siemens C-Cam, GE Ventri & GE Optima

PF16R-057-5M-NC 10.5" X 16" rectangle 5 mCi

PF16R-057-7.5M-NC 10.5" X 16" rectangle 7.5 mCi

PF16R-057-10M-NC 10.5" X 16" rectangle 10 mCi

Co-57 Flood Source for Millenium MPR, VG & MG, GE Hawkeye, Infinia, Myosite, Philips Argus, Forte, Skylight, Symbia & Siemens E-Cam

PF24R-057-5M-NC 16.5" X 24" rectangle 5 mCi

PF24R-057-10M-NC 16.5" X 24" rectangle 10 mCi

PF24R-057-15M-NC 16.5" X 24" rectangle 15 mCi

PF24R-057-20M-NC 16.5" X 24" rectangle 20 mCi

Co-57 Flood Source for GE Starcam XCT, ACT, Adac ARC 3000, Cirrus, Siemens Orbiter

PF18C-057-5M-NC 18.5" round 5 mCi

PF18C-057-10M-NC 18.5" round 10 mCi

PF18C-057-15M-NC 18.5" round 15 mCi

PF18C-057-20M-NC 18.5" round 20 mCi

***Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only***

C-Thru™ Flood Source



- C-Thru source holder is made of transparent, durable plastic
- The radioactive area is clearly visible, enabling the C-Thru source to be easily positioned on the camera head
- The manufacturing process ensures that Nuclear Medicine customers will receive the highest quality flood source available to perform quality control on gamma cameras
- Flood sources are scanned using a gamma camera. The camera images each flood source for parameters including differential and integral non-uniformity in accordance with ANSI N42.27
- Visual checks are performed to detect any distortions of the active element and the outside capsule. A leak test is performed on all sources prior to shipment
- **Flood Sources are available with or without a Lead Lined Case**
- **Lead Lined Case is sold separately**
- **"Large Field of View" Sources marked with an * are shipped with the new ProKase or Pb Shipper; see page 156 & 157 for more information**



Model#	Active Dimensions	Activity
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For Digirad Cardius, Dilon & GVI Clear Vision

CTRF-10012-NC	8.9" X 8.9" square	10 mCi
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For CardioCam, CardioSpect D90, NeuroSpect Quad

CTRF-13770A-NC	15.2" X 9.1" rectangle	10 mCi
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*For CardioMD, Siemens C-Cam, GE Ventri & GE Optima

CTRF-10017-NC	10" X 16" rectangle	10 mCi
CTRF-10018-NC	10" X 16" rectangle	15 mCi
CTRF-10019-NC	10" X 16" rectangle	20 mCi

ProKase

*For Millenium MPR, VG & MG, GE Hawkeye, Infinia, Myosite, Philips Argus, Forte, Skylight, Symbia & Siemens E-Cam

CTRF-10001-NC	16.5" X 24.4" rectangle	5 mCi
CTRF-10000-NC	16.5" X 24.4" rectangle	10 mCi
CTRF-10002-NC	16.5" X 24.4" rectangle	15 mCi
CTRF-10003-NC	16.5" X 24.4" rectangle	20 mCi

ProKase

*For GE Starcam XCT, ACT, Adac ARC 3000, Cirrus, Siemens Orbiter

CTRF-10051-NC	18.5" round	5 mCi
CTRF-10050-NC	18.5" round	10 mCi
CTRF-10052-NC	18.5" round	15 mCi
CTRF-10053-NC	18.5" round	20 mCi

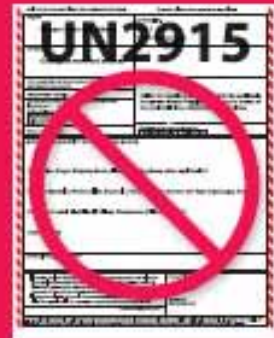
**Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only**

Call Pinestar toll-free 1-800-682-2226, to place an order

Pb Shipper Now Available for Cardiac Size Flood Source

**NO MORE
UN2915**

Save time and money with our "hassle-free" Pb Shipper. With a lead-lined sleeve covering all 6 sides, our new Pb Shipper is designed to qualify as an UN2910 "Excepted Package" when the surface reading for your Co-57 flood source is $\leq 0.5\text{mRem/hr}$.



**Do you find yourself holding on to
your depleted flood source longer than you want?**

**Pb Shipper is the convenient and effective alternative for returning
and receiving your flood source when a new case is not needed.**

**Now available for all
Featherlite® and C-Thru® Flood Sources**

Call Pinestar toll-free 1-800-682-2226, to place an order

Introducing the ProKase™ for Highly Portable Flood Source Storage and Handling

ProKase



- Wide Clamshell Opening for easier access to your Flood Source
- Unique Flared Base for improved stability
- Ergonomic Top Handle for easier rolling
- 4 Swivel Wheels for greater mobility
- Wheel Brake for added safety

For Large Field of View
Featherlite® and C-Thru® Flood Sources

Be a ProKase Pro!



Wide Clamshell Opening
for Easy Access



Ergonomic Top Handle
for Easier Rolling



Pull Handle
to Exit Confined Spaces



Unique Flared Base
for Improved Stability

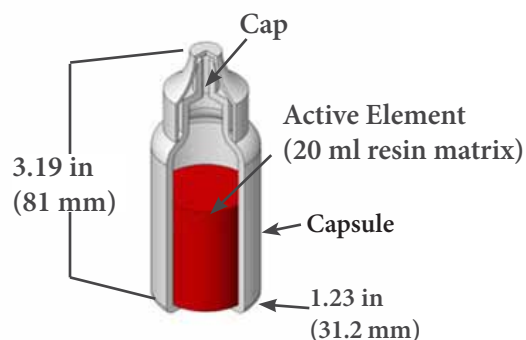


Wheel Brake
for Added Safety



Four Swivel Wheels
for Greater Mobility

Reference/ Vial Sources



- Dose Calibrator Reference Sources provide a safe and convenient method of calibrating instruments for measuring the accuracy of imaging solutions most commonly utilized by medical technicians
- The Dose Calibrator is manufactured by uniformly distributing the active element in 20 mL of epoxy, comprising a density of approximately 1.0 g/cm³
- Each standard is supplied in a 27 mL polyethylene vial. Calibration is in terms of activity contained in an aqueous solution
- NIST traceable within $\pm 5\%$ at the 99% confidence level
- Each source is supplied in a lead shield and is accompanied by a certificate of calibration and leak test report

<u>Model#</u>	<u>Isotope</u>	<u>Activity</u>
NMC-206	Cobalt-57	5 mCi
NMC-207	Cobalt-57	10 mCi
NMC-358	Barium-133	250 μ C
NMC-354	Cobalt-60	50 μ Ci
NMC-350	Cesium-137	200 μ Ci
NMC-356	Cesium-137	250 μ Ci.....

<u>Model#</u>	<u>Isotope</u>	<u>Activity</u>
<u>Reference Source Sets:</u>		
NMC-362	Source Set includes:	
	Cobalt-57	5 mCi
	Cobalt-60	50 μ Ci
	Cesium-137	200 μ Ci
NMC-367	Source Set includes:	
	Cobalt-57	5 mCi
	Cobalt-60	50 μ Ci
	Cesium-137	200 μ Ci
	Barium-133	250 μ Ci
NMC-369	Source Set includes:	
	Cobalt-57	5 mCi
	Cesium-137	200 μ Ci
	Barium-133	250 μ Ci

*Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only*

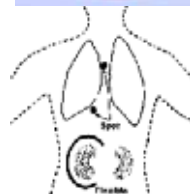
Rod Sources



- Each source consists of a lucite rod measuring 5" x 0.5" (127 mm x 12.7 mm) or can be custom ordered as 2.95" x 0.5" (74.9 mm x 12.7 mm)
- The activity is located in a 0.187" x 0.187" (4.75 mm x 4.75 mm) well, positioned approximately 0.250" (6.35 mm) from the top of the rod
- Rod sources are calibrated and NIST traceable with an accuracy of $\pm 5\%$ at the 99% level

Model#	Isotope	Activity
063-137	Co-57	0.1 μ Ci
063-Co-1.0	Co-57	1.0 μ Ci
063-138	Ba-133	0.1 μ Ci
063-139	Cs-137	0.1 μ Ci
NMC-010	Co-57	10 μ Ci
063-100	Rod Source Set, 3" x 0.5" 0.1 μ Ci Includes: Co-57, Na-22, Cs-137, Mn-54, Co-60, Ba-133, Cd-109	
063-101	Rod Source Set, 3" x 0.5" 1.0 μ Ci Includes: Co-57, Na-22, Cs-137, Mn-54, Co-60, Ba-133, Cd-109	

Spot Marker Source



- Used for patient orientation during the performance of a camera study
- 0.136" (3.45 mm) diameter active area is marked with purple epoxy and centered in a 1" x 0.250" (25.4 mm x 6.35 mm) clear acrylic disc
- Contained activity is supplied as a nominal value $\pm 15\%$

Model#	Isotope	Activity
67-289	Co-57	50 μ Ci*
NMC-8200	Co-57	100 μ Ci*
4121	Co-57	200 μ Ci*
4129	Co-57	300 μ Ci*
CAL-2600-100	Ge-68	100 μ Ci*
CAL-2600-10	Ge-68	10 μ Ci*
CAL-2600-1	Ge-68	1 μ Ci*
CAL-2600-0.1	Ge-68	0.1 μ Ci

**We require documentation authorizing the use of Co-57 and Ge-68 in your state. Please send a photocopy of the current license.*

Na-22 Point Source



- Activity: 100 μ Ci
- Overall Dimension: 1" Dia x 0.25" H (25.4 mm x 6.35 mm)
- Active Dimension: .40" (1 mm)
- Nuclide Purity: >99%

GF-0227 Na-22 100 μ Ci

Right & Left Marker

- Consists of two 50.4 mm diameter discs containing a total amount of 100 μ Ci of Co-57
- Each disc has a "R" or "L" milled out and filled with epoxy containing the Co-57
- A storage case is provided with each set

4117 Co-57 Total 100 μ Ci

Flexible Marker Source



- Co-57 uniformly dispersed in an epoxy matrix is injected into a 0.094" (2.4 mm) outer diameter flexible plastic tube having an inner diameter of 0.02" (0.508 mm)
- Overall length and active length of the ruler is 19.7" (50 cm)
- Contained activity is supplied as a nominal value $\pm 15\%$

4110	Co-57	(100 μ Ci) 2 μ Ci/cm
4111	Co-57	(200 μ Ci) 4 μ Ci/cm

**Auto QC Sources for
SIEMENS SYMBIA CAMERA
HEGL-0133 & PHI-0124**

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*Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only*

Call Pinestar toll-free 1-800-682-2226, to place an order

Radioactive Rulers



The Rigid Ruler is a plastic tube 0.197" (5 mm) in diameter containing 17 alternating 0.394" (10 mm) sections of Co-57 and inactive lead
Overall length of the ruler is 6.7" (17 cm) with an active length of 5.91" (15 cm)
Contained activity is supplied as a nominal value $\pm 15\%$

4113 Co-57 Rigid Radioactive Ruler (80 μCi)

4114 Co-57 Rigid Radioactive Ruler (160 μCi)

Radioactive rulers and markers are used to define anatomical locations and/or organ size during a camera study.
The Flexible Ruler is a plastic tube 0.19" (4.8 mm) in diameter containing 47 alternating 0.394" (10 mm) sections of Co-57 and inactive lead
Overall length of the ruler is 18.5" (47 cm) with an active length of 17.7" (45 cm)

4115 Co-57 Flexible Radioactive Ruler (230 μCi)

4116 Co-57 Flexible Radioactive Ruler (460 μCi)

Fillable Point Source Marker

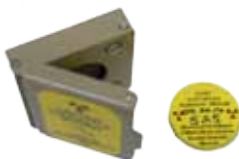
SAVE TIME FOR CAMERA-TO-PATIENT ALIGNMENT

Point Source Marker is easily filled with the same radionuclide to be used in imaging procedure. Small clear plastic receptacle, 1" diameter x 1/2" thick, has a centered channel to contain the nuclide. A nylon screw-plug tightens against an o-ring completing a tight, safe seal. Marker is re-usable or nuclide can be decayed or removed. Available in sets of 4.



043-274 Fillable Point Source Marker, set of 4

Check Source & Holder



The 1.0 microcurie Cs-137 Check Source will comply with recent changes in the NRC regulations. An optional holder is available to permanently mount the Check Source on the side of your instrument.

051-196 Check Source, Cs-137 1.0 μCi

051-166 Check Source Holder

Penpoint Marker Source



Pen Point marker is used to mark a point of interest during a camera study. The Pen Point Marker contains Co-57 in a ceramic matrix at the end of a 5.0" (12.7 cm) anodized aluminum rod. The pen-shaped rod screws into a brass cap which shields the active point. The Pen Point Marker is used in tracing the outlines of anatomical features on a patient. The trace appears almost instantly on the camera display. Contained activity is supplied as a nominal value $\pm 15\%$.

Nuclide: Cobalt 57

Nominal Activity: 250 μCi

Dimensions: Length-5" / Diameter-0.375"

4123 Penpoint Marker Source*, Co-57

**We require documentation authorizing the use of Cobalt-57 in your state. Please send photocopy of the complete current license.*

Liver Marker/ Ruler



The Liver Marker/Ruler is designed to mark, outline, and measure the liver while performing routine studies. When placed over the area of interest, a measurement is taken by counting the space between holes. The marker is made of vinyl-coated leaded rubber for flexibility and easy cleaning. Each unit is 5 1/2" long and 2" wide with holes 1 cm apart. Two units are supplied as a kit.

Lead Equivalency: 1 mm Hole Size: 9 mm

Size: 5 1/2" L x 2" W (14 x 5 cm)

123-500 Liver Marker/Ruler

Gamma Check Source

This disc type is preferable with standard flat faced crystals (no license necessary)

101-103 Uncalibrated Cs-137 Disc Source, 10 μCi , 1" D x 1/4" thick

*Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only*

Sources for SPECT

We supply a wide range of Attenuation Correction line sources for Single Photon Emission Computed Tomography (SPECT) studies. A SPECT image is developed by measuring a collimated radiation beam emitted from a patient's body. The radiation beam is produced by injecting a known radiopharmaceutical into the patient.

SPECT image quality can suffer from unquantified attenuation effects caused as the beam passes through tissue of varying density and thickness. A line source is utilized to produce a "control beam" that is measured concurrently with the "radiopharmaceutical beam." The two beams are integrated and patient specific attenuation is calculated.

The resulting image is of higher quality than an image produced without attenuation correction. The typical nuclides used in Attenuation Sources for SPECT studies are Gd-153, Co-57 and Ba-133. Sources are singly or doubly encapsulated in both line and point geometries. The nuclides, activities and dimensions are manufactured in accordance to OEM Camera manufacturer specifications.

Camera Manufacturer	Camera Model	Item#	Nuclide	Nominal Activity	Sold As	System Requires	Recommended Replacement
Siemens Medical	E-Cam	NES-8426-28 NES-8426-4	Gd-153 Gd-153	192 mCi 80 mCi	Set/ 28 Set/ 4	1 set 1 set	N/A 6 months
	Symbia	HEGL-0133 PHI-0124	Gd-153 Co-57	10 mCi 50 µCi	Each Each	1 1	2 years 1 year
GE Healthcare	Millenium Myosite SMV DST XLI	NES-8429-SET NES-8429-SET NES-8424	Gd-153 Gd-153 Gd-153	450 mCi 450 mCi 300 mCi	Set/ 2 Set/ 2 Each	1 1 2	12-18 months 12-18 months 12-18 months
Philips/ADAC	MDC Vertex	HEGL-0109	Ge-68	500 µCi	Each	1	1 year
	Forte Skylight Cardio 60	NES-8412 78410	Gd-153 Lead Pig	250 mCi	Each Each	2 3	1 year 12-18 months
	Cardio MD	NES-8497	Gd-153	240 mCi	Each	2	12-18 months
	Precedence	MMS07-153-100U	Gd-153	100 µCi	Each	6	12-18 months
	Brightview XCT	MMS07-153-100U	Gd-153	100 µCi	Each	6	12-18 months
Spectrum Dynamics	D-SPECT	MED3614	Co-57	12 mCi	Each	1	1 year

Fillables:

We can convert your fillable phantom to a long-lived solid source! Contact your sales rep for more info.



Call Pinestar toll-free 1-800-682-2226, to place an order

Sources for PET

EZIP is the leader in source manufacturing for Positron Emission Tomography (PET) studies. EZIP manufactures dedicated Ge-68 Transmission Sources and Quality Assurance Sources for major PET camera makers such as GE Healthcare, Siemens Medical Solutions, Positron Corporation, and others. In addition, EZIP manufactures dedicated Cs-137 and Na-22 sources for dedicated PET cameras.



For Initial Set Up of Ge-68 sources for your PET Camera, please call Pinestar Technology for pricing

Camera Manufacturer	Camera Model	Item#	Nuclide	Nominal Activity	Sold As	System Requires	Recommended Replacement
Siemens Medical	ECAT Accel	HEGL-0080-5M EG-0317-3.3M	Ge-68 Ge-68	5 mCi 3.3 mCi	Each Each	3 1	1 year 1 year
	ECAT EXACT HR+	HEGL-0080-4M EG-0317-3.3M	Ge-68 Ge-68	4 mCi 3.3 mCi	Each Each	3 1	1 year 1 year
	ECAT EXACT 47	HEGL-0080-3M EG-0317-3.3M	Ge-68 Ge-68	3 mCi 3.3 mCi	Each Each	3 1	1 year 1 year
	ECAT ART	HEGL-0080-1M EG-0317-1.2M PHI-0089	Ge-68 Ge-68 Cs-137	1 mCi 3.3 mCi 15 mCi	Each Each Each	1 1 2	1 year 1 year N/A
	Biograph Non Pico	HEGL-0080-1M EG-0317-1.2M	Ge-68 Ge-68	1 mCi 2 mCi	Each Each	2 1	1 year 1 year
	Biograph Pico	HEGL-0080-1M EG-0317-2M	Ge-68 Ge-68	1 mCi 2 mCi	Each Each	2 1	1 year 1 year
	Biograph True V	HEGL-0080-1M EG-0318-2M	Ge-68 Ge-68	1-1.2 mCi 2-2.5 mCi	Each Each	2 1	1 year 1 year
GE Healthcare	Discovery ST	HEGL-0132	Ge-68	1.49 mCi	Each	1	1 year
	Discovery 690	HEGL-0139 VQC-068	Ge-68 Ge-68	500 µCi 9.5 µCi	Each Each	1 1	1 year 1 year
	Discovery 600	HEGL-0140 VQC-068	Ge-68 Ge-68	270 µCi 9.5 µCi	Each Each	2 1	1 year 1 year
	Discovery LS	HEGL-0020 HEGL-0019	Ge-68 Ge-68	1.62 mCi 10.8 mCi	Each Each	1 2	2 years 6-9 months
Philips Healthcare	CPET	GF-0227 HEG-0096	Na-22 Cs-137	100 µCi 5 mCi	Each Each	1 1	2 years N/A
	Allegro	HEG-0111 GF-0227	Cs-137 Na-22	20 mCi 100 µCi	Each Each	1 1	N/A 2 years
	Gemini GXL	GF-0227 MMS05-022-10U	Na-22 Na-22	100 µCi 10 µCi	Each Each	1 6	2 years 2 years
	Gemini	HEGL-0136	Na-22	100 µCi	Each	1	2 years
Positron	HZL, HZLR HZ, Auricle	HEGL-0110 HEGL-0130	Ge-68 Ge-68	1-6 mCi 1-6 mCi	Each Each	1 1	1 year 1 year
Ge-68 Rectangular Flood Source							
Naviscan	Solo II	FL08R-068-30U (8.66" L x 3.94" W x .5")	Ge-68	30 µCi	Each	1	1 year

Multimodal Spot Markers

Multimodal Spot Markers and Fiducial Markers

Available in Co-57 for CT-SPECT and Ge-68 or Na-22 for CT-PET fusion imaging, these markers help increase the accuracy of your image registration. Activities up to 100 μ Ci nominal available.

Model MMS01

Specifications

Capsule: 1" x 0.25" (D x H)

white Delrin

Active dimensions:

1 mm x 1 mm cylinder

Suggested usage:

high-resolution PET point source or fiducial marker.



Model MMS02

Specifications

Capsule: 1" x 0.25" (D x H)

clear cast acrylic

Active dimensions:

1.5 mm x 1.5 mm cylinder

CT target: 1/4" OD

bone-equivalent ring

(surrounds active element)

Suggested usage:

multimodal fiducial marker for image co-registration.

Model MMS03

Specifications

Capsule: 1" x 0.25" (D x H)

clear cast acrylic with etched

crosshairs for laser alignment

Active dimensions:

1 mm diameter sphere

CT target: 2 mm OD

bone-equivalent ring

(surrounds active element)

Suggested usage:

multimodal fiducial marker for image co-registration.

Model MMS04

Specifications

Capsule: 3 x 3 x 8 mm

clear acrylic with Delrin plug

Active dimensions:

1 x 0.5 mm (D x H) cylinder

CT target: active element

is CT-visible

Suggested usage:

multimodal fiducial marker for image co-registration, recommended for small animal studies or other situations where a small source capsule is needed.

Model MMS06

Specifications

Capsule: 1" x 0.25" (D x H)

clear cast acrylic

Active dimensions:

0.25 mm diameter sphere

Suggested usage:

high-resolution point source or spot marker for use with scanners with resolution better than 3 mm.

Multimodal Spot Markers



Radioactive Source Reclamation

Do you have Spent Flood, Reference Sources, Rods, Spot Markers etc, that you would like to dispose of??

- Give us a call and we can get you a quote for Return Kits
- We will need the Original Calibration Date and Original Activity when you call
- We are offering Special Pricing for the Return Kits



Call Pinestar toll-free 1-800-682-2226, to place an order

Dose Calibrator Reference Sources Daily Activity with $\pm 5\%$ Reading for 1 year

This will eliminate daily calculations or graph plotting.
Total of 1095 reading per Reference Source.
Data supplied in binder for permanent storage.

Date	Cs-137 (μCi)	+ / - 5%
1.	1231.77	(1293.36- 1170.18)
2.	1228.62	(1290.05- 1167.19)
3.	1225.48	(1286.76- 1164.21)
4.	1222.35	(1283.47- 1161.23)
5.	1219.23	(1280.19- 1158.27)
6.	1216.12	(1276.92- 1155.31)
7.	1213.01	(1273.66- 1152.36)
8.	1209.91	(1270.41- 1149.41)
9.	1206.82	(1267.16- 1146.48)
10.	1203.74	(1263.92- 1143.55)
11.	1200.66	(1260.70- 1140.63)
12.	1197.59	(1257.47- 1137.71)
13.	1194.54	(1254.25- 1134.81)
14.	1191.48	(1251.06- 1131.91)

To place an order please send the following information:

ACCURACY TEST DATA

	Calibration Date	Original Activity
Co-57	_____	_____
Co-60	_____	_____
Cs-137	_____	_____
Ba-133	_____	_____

CONSTANCY TEST DATA

Reference Source	Window	Original Activity	Calibration Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

In order to enter the original activity and calibration date for consistency test, the accuracy test on the reference source should be done first. For example, if Cs-137 is used to do consistency test (on different settings), an accuracy test on Cs-137 should be done first (Cs-137 window). If the accuracy test falls within $\pm 5\%$ deviation of the predicted activity a reading should be taken at different settings. For example, Tc-99m, Thallium, etc. That reading will correspond to the original activity and calibration date for that day for consistency test data.

Name of Hospital	_____	Tech.	_____
Address	_____		

Telephone Number:	_____	PO#	_____
Contact Person	_____		

1 or 2 dose worksheet for 1 year
3 dose worksheet for 1 year
4 dose worksheet for 1 year
5 dose worksheet for 1 year.

6 dose worksheet for 1 year
7 dose worksheet for 1 year
8 dose worksheet for 1 year

**Did you know the Bullet Syringe Shield has no
screws or springs?**

**The unique threaded design grasps onto the
barrel of the syringe to secure it place.**

See pages 20 and 86

**Did you know we offer Special Pricing
for Standing Orders of Xenon and
DTPA Aerosol supplies?**

We also offer Quantity Price Discounts!

See page 108 - Call For Details

**Save time and money with our
"hassle free" PB Shipper!**

**Our PB Shipper is a convenient and effective
alternative for receiving and returning your flood
source when a new case is not needed.**

See page 156

**Don't risk the spread of infection with a
torn table pad.**

**We have standard and custom table pads
including the Cardio-MD.**

See page 101

797 Dose Dispensing Hood 68-70

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