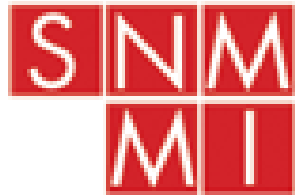# Catalog 39
2025-2026

New Orleans, LA
June 2025
Booth # 1926

SNM MI SOCIETY OF
NUCLEAR MEDICINE
AND MOLECULAR IMAGING

Visit Us At

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Pinestar Mobile

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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" VGA LCD color 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, 80 nuclides

Streamlined Quality Assurance

- Built-in dose calibration, quality control and self diagnostics
- Automated QC including constancy, geometry and linearity programs

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 µCi), 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 ± 2%
Linearity: Within ± 2%
Response Time: Within 2 sec., 4 to 16 sec. for very low activity samples

Repeatability: Within ± 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 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 Nuclear Medicine Management Systems

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: 9.5 in   Width: 9 in
Depth: 10.5 in   Weight: 7.5 lb

Chamber Dims: Height: 17.25 in   Weight: 30 lb
Diameter: 6.76 in   Cable Length 12 ft (longer cables available)
Well Dia.: 2.4 in   Well Depth: 10 in

Cables: Power: 6 ft   Printer: 6 ft

CRC-55tR	Dose Calibrator
	Includes: Ionization chamber, display screen, PC port, chamber well insert & syringe dipper

Optional Accessories:

086-241	Replacement Chamber Well Insert
086-240	Replacement Vial/Syringe Dipper
008-015	60CC Syringe Dipper
PTI-PS	Positron Shield for Dose Calibrator Chamber
34-210	Calicheck Linearity Kit
086-242	Vial / Syringe Dipper
086-2020	20cc Syringe Dipper
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
7900-0352	Screen Protector, 5/pk
9501-0023	12 Month Manufacturer's Service Contract After Warranty

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 µCi)
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 ± 2%.
Linearity: Within ± 2%

Repeatability:	Within ±1% within 24 hrs, during which time calibration is powered at all times
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
Molybdenum-99 Assay:	Methods: CAPMAC® & canisters
	Measured Values: Mo-99 elution, Tc-99m, Tc-99m/Mo-99 Ratio
PC Port:	Interface: RS-232 & USB
	Compatibility: Standard Nuclear Medicine Management Systems; Ethernet Interface
Optional Printers:	RS-232 & USB Ports
	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
Cable:	Power: 6 ft Optional: Printer: 6ft

Console Dims:	Height: 9.5 in	Width: 9 in
	Length: 10.5 in	Weight: 7.5 lb
Chamber Dims:	Height: 17.25 in	Weight: 30 lb
	Diameter: 6.76 in	Cable Length 12 ft (longer cables available)
	Well Dia.: 2.4 in	Well Depth: 10 in
Well Counter Dims:	Height: 9.38 in	Dia: 6 in
	Weight: 15.2 lb	Well Dia: .67 in
	Well Depth: 1.5 in	Cable Length 9 ft

CRC-55tW	Dose Calibrator
	Includes: Ionization chamber, display screen, well counter, PC port, chamber well insert & syringe dipper

Optional Accessories:

086-241	Replacement Chamber Well Insert
086-240	Replacement Vial/Syringe Dipper
008-015	60CC Syringe Dipper
PTI-PS	Positron Shield for Dose Calibrator Chamber
34-210	Calicheck Linearity Kit
086-242	Vial / Syringe Dipper
086-2020	20cc Syringe Dipper
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
5420-2072	Auxiliary Shield for Well Counter Chamber
5420-PET	PET Auxiliary Shield for Well Counter Chamber
0975-137R	Cs-137 0.5 µCi Rod Source for Well Counter
7900-0352	Screen Protector, 5/pk
9501-0024	12 Month Manufacturer's Service Contract After Warranty

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

CRC®-55tPET Dose Calibrator
For Cyclotron Facilities

Ultimate Features in the Industry's Finest Package
- 8" Color touch screen display
- Software upgraded via USB or Flash Drive
- Enhanced software supports dual chamber technology
- Capable of assaying up to 20 Ci of F-18

User-defined Hotkeys
- Touch technology provides rapid selection of isotopes
- 28 programmable keys, 80 nuclides

Enhanced Automated Software
- Automated quality control tests and self diagnostics
- Automatic zero and background subtraction
- Reference source data decay-corrected to current time/date

Two Year Warranty - US Only

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 µCi (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 ± 2%	
	Linearity: Within ± 2%	
	Response Time: Within 2 sec., 4 to 16 sec. for very low activity samples	
	Bias Voltage: +500V	
Repeatability:	Within ± 1% within 24 hours during which time the calibrator is continuously on all the time	

Overall Accuracy Determined By:
1) Calibration for the specific nuclide and the sample configuration
2) Accuracies of standard sources used for calibration of electrometer

Tests:
Diagnostics: Full test of program, system memories
Daily: Auto Zero, Auto Background, Voltage Test, Data Check, Accuracy and Constancy
Enhanced: Linearity, Geometry

Nuclear Data: Nuclide Keys: 28 programmable keys
System Memory: Over 80 nuclides
(Calibration number and half life)
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: Interface: RS-232 & USB
(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: 9.5 in   Width: 9.0 in
Depth: 10.5 in   Weight: 7.5 lb

Chamber Dims: Height: 17.25 in   Weight: 30 lb
Diameter: 6.76 in   Cable Length 12 ft (longer cables available)
Well Dia.: 2.4 in   Well Depth: 10 in

Cables: Power: 6 ft
Printer: 6 ft

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	Replacement Chamber Well Insert
086-240	Replacement Vial/Syringe Dipper
086-242	Vial / Syringe Dipper
086-2020	20CC Syringe Dipper
008-015	60CC Syringe Dipper
PTI-PS	Positron Shield for Dose Calibrator Chamber
34-210	Calicheck Linearity Kit
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
7900-0352	Screen Protector, 5/pk
9501-0025	12 Month Manufacturer's Service Contract After Warranty

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

086-240 Vial/Syringe Dipper

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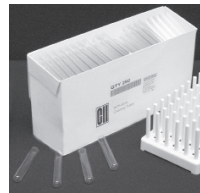
086-241 Well Insert

5120-2286 Copper Liner

34-210 Calicheck™

Linearity Kit

008-015 60 cc Syringe Dipper

Test Tubes
12 x 75mm test tubes

0670-0016 Test Tubes, 250/pk

086-2020 20cc Vial / Syringe Dipper

Test Tube Rack
Holds up to 90 tubes

0670-0022 Test Tube Rack
specify tube size when ordering

5130-0006 Moly Assay Shield
Vial, .3" lead
3.5" H x 2" dia

CAPRAC Well Liner

5420-0121 Well Liner, 5/pk

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

Positron Shield for
Capintec Dose Calibrator Chamber

**Specs: Lead Rings
12" outside diameter
19 3/4" overall height
575 lbs
2" x 4" cutout in bottom rings for cable**

PTI-PS   Positron Shield

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

**Specs: 8" x 6 11/16" x 13 5/8"
1" thick lead (shield fits snugly
around the well chamber for a
total of 2" of lead shielding.)
Weight: 95 lbs**

5420-PET Auxiliary Shield

Positron Stand
Supports a dose calibrator and positron shield!
**Specs: 3-Legged Adjustable Stand
Height ranges from 22 7/8" to 25 3/8"
We can customize the design to meet your
specifications**
PS-STAND   Positron Stand

Printers for CRC25R & 55T Dose Calibrators and Caprac Wipe Test Counters

Epson Roll Printer is a sturdy, high-qualtiy printer provides graphic output with wipe reports, showing the peak energy range of the nuclides on the wipe. The printer utilizes a black/red ribbon to report wipes that are higher than the trigger levels for contaminaton.

Abnormal values are printed in red for easy/fast identification.

CE

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

Epson Ticket Printer 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 |
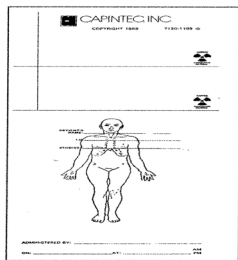
CRP-200   Duplicate Tickets with Peel-off, Self Stick Labels, 250/pk

CRP-200

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: 9.38"	Diameter: 6"
	Weight: 15.2 lb	Cable Length: 9 ft
	Well Diameter: .67"	Well Depth: 1.5"
	Crystal Dims: 1.5" x 1.75"	
Shielding:	0.5" lead	
Cables:	Printer: 6 ft (longer cables are available)	
Power:	Standard: 100-240 VAC (50/60 Hz) 25W	

CAPRAC-t   Wipe Test/Well Counter

Optional Accessories:
0975-137R	Cs-137 0.5 µCi 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
9501-0028	12 Month Manufacturer's Service Contract After Warranty

6

Wiper and Multi-Wiper™

Wiper Gold
With or Without Printer

Multi-Wiper
With Printer
(domestic only)

LTIW100-NP	Wiper Gold *Without Printer*
LTIW100-P	Wiper Gold *With thermal printer*
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*)

- 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

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:	x1, x10, x100, x1000
Ratemeter Linearity:	reading within 10% of true value
Response:	toggle switch for FAST (4 seconds) or SLOW (22 seconds), from 10% to 90% of final reading
Zero:	pushbutton to zero meter
High Voltage:	adjustable from 200-2500 volts (will support 60-MΩ scintillation loads)

Threshold:	Adjustable from 1.0 to 10.0
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
Data Output:	9-pin, RS-232 port for connection to PC (includes 1 M RS-232 to USB adapter cable)
Meter:	2.5" arc, 1 mA 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 (-4 to 122 ° F) May be certified to operate from -40 to 65 ° C (-40 to 150 ° F)
Size:	8.5" H x 5" W x 8.5" L, excluding handle
Weight:	7.5 lb, including battery

Model 243 Specifications:

Well:	0.67" Dia x 1.6" L
Detector:	1.8" Dia x 2" thick NaI(Tl) well scintillator
Sensitivity:	Will detect 0.005 μCi gamma or 200 dpm removable contamination for Tc-99m, I-131, Tl-201, In-111, I-125, Cs-137, Ga-67
Efficiency:	80% for I-125, 90% for Tc-99m, 33% for Cs-137, 43% for Co-60

Background:	≤ 1000 cpm in a 10 uR/hr field (optional 0.5" lead shielding Part No. 7379-004)
Operating Voltage:	500-1200 volts
Photomultiplier Tube:	2" diameter
Lead Shielding:	0.5" 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

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

NMIS - Serving The Nuclear Medicine Community

NMIS is the leading name in Radiopharmaceutical tracking software and record keeping in the Nuclear Medicine industry. NMIS is designed to simplify patient scheduling, patient dosing, inventory control, receiving and waste management. For added convenience, customers can easily place and track their orders online. These features are combined with a comprehensive health physics suite, enabling our customers to remain compliant with their regulatory requirements. We stay up-to-date by listening to our users and implementing their ideas to make our software what it is today, the industry gold standard!

Simplified Workflow

- Access everything from one main screen
- Shortcuts for day-to-day tasks
- Quickly view all patient information
- Customizable column size and order
- View satellite department data easily

Injection Confirmation Scan

- NEW mobile application (iOS/Android)
- Confirm that the correct dose is administered to the right patient
- No ePHI data is stored on your device

Streamlined Record Keeping

- Patient Dose
- Procedure
- Referring Physician
- Radioactive Waste Disposal

Automated To Daily and Monthly Record Keeping

HL7 RIS/HIS Interface

The NMIS HL7 interface is a connector which allows your RIS or HIS to send and receive information from your department. This feature saves time, increases accuracy and can send exposure information back to a central storage location.

DICOM Interface

The NMIS DICOM Worklist Interface allows you to pull patient information from your Worklist Server. This feature reduces transcription errors.

Product Features

- Dosage tracking from arrival through disposition
- Scheduled monthly reports with digital signatures
- Unused dose reports to request credits from the pharmacy
- Online ordering enhances customer service
- Patient statistics documents productivity and staffing
- HL7/DICOM interface options reduce transcription errors
- Complete health physics suite to aid in regulatory compliance

NMIS	**Nuclear Medicine Information System for Nuclear Medicine**
NMIS-C	**Nuclear Medicine Information System for Nuclear Cardiology**
NMIS-P	**Nuclear Medicine Information System for PET**
NMIS-BARCODE	**Barcode Reader for NMIS Systems**

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

Inkjet/Laser Paper for NMIS

Inkjet/LaserPaper is sold by the box, there are 1000 (8.5" x 11") 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-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-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

CAUTION RADIOACTIVE MATERIAL

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

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

RAYONNEMENT DANGER RADIATION

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

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

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

RAYONNEMENT DANGER RADIATION

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)
SLP-320IPA   NMIS Labels

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

Captus® 4000e Thyroid Uptake System

New Features

- New and improved color touch screen user interface
- Large 20 inch All-In-One touch screen 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:
Hardware Features:
Thyroid Uptake Stand:
- Adjustable height PC stand, left or right side mounting
- Articulating arm with 34" vertical range of travel and 220° collimator rotation
- Neck phantom storage
- QA source holder for reproducible geometry
- Protective cable management system
- Fully protected internally routed cables
- (4) Heavy duty locking casters that swivel 360°

Computer:
- 20" All In One Touch Screen Flat Panel Computer
- Windows® Operating System

Printer:
- Color Ink Jet

Collimator:
- 2" diameter 14 pin NaI (Tl) detector with 1.55" deep and .66" diameter well

MCA 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
- ROIs - manual or automatic
- 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

Power:
- Line Voltage: 120 VAC, 60Hz, 2.6 AMP; 230 VAC 50Hz, 1.1 AMP
- Isolation Transformer with hospital grade cord and plug

Includes: .5 µCi Cs-137 and .5 µCi Eu-152 Rod Sources

Warranty: Two Year - US Only

Thyroid Uptake Stand Dimensions:
- Closed Storage Position: 56" Height x 28" 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

Software Features:
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

Thyroid Uptake:
- Provides four predefined protocols
- Supports both capsule and liquid dose formats
- Dose may be pre-counted before patient assignment
- Predose measurement option
- Normal range option

Wipe Tests:
- Setup for multiple groupings
- Isotope identification available;
- Spectrum is displayed for each wipe
- Activity exceeding trigger levels flagged in red

Bioassay:
- Monitors staff for I-123, I-125 and I-131 exposure
- Custom protocol and reports available

Optional DICOM Interface

5430-30151 Captus 4000e Thyroid Uptake System without Well Counter
        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
5430-30152   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
5230-0038   Thyroid Uptake Neck Phantom
5420-0087   Test Tubes for Wipe Samples, 100/pk
5430-00007   Cap-DICOM Software
9501-0071   12 Month Manufacturer's Service Contract After Warranty, For Captus 4000e No Well Counter
9501-0072   12 Month Manufacturer's Service Contract After Warranty, For Captus 4000e With Well Counter

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

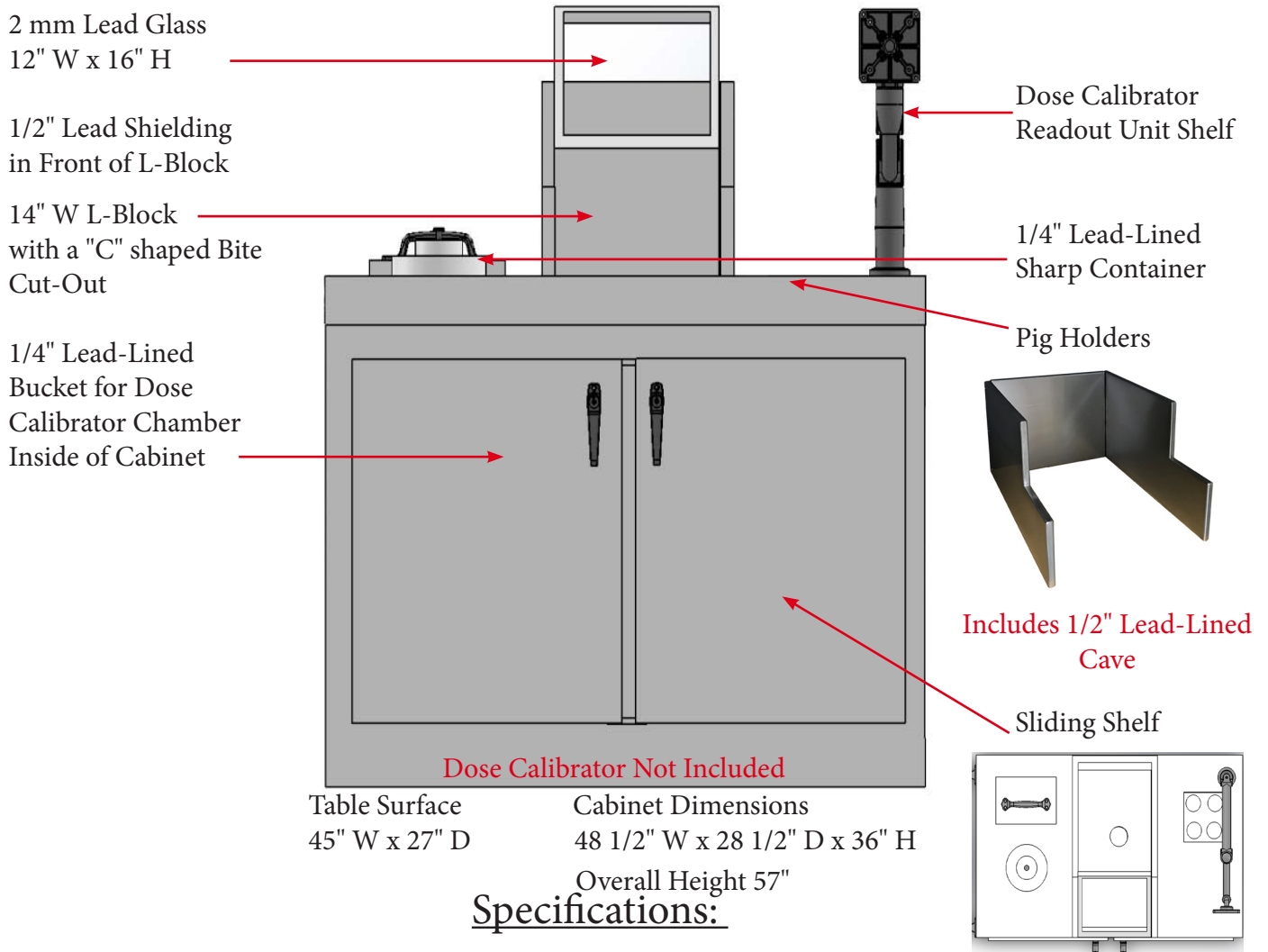# Nuclear Medicine Hot Lab Package

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 µCi

Contoured Leg Rest

Cardboard & Plastic Signs

Bind-It Decontaminant

Ludlum 14C Survey Meter

Pancake or End Window Probe

Check Source

Check Source Holder

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

2 mm Lead Glass
12" W x 16" H

1/2" Lead Shielding
in Front of L-Block

14" W L-Block
with a "C" shaped Bite
Cut-Out

1/4" Lead-Lined
Bucket for Dose
Calibrator Chamber
Inside of Cabinet

Dose Calibrator
Readout Unit Shelf

1/4" Lead-Lined
Sharp Container

Pig Holders

Includes 1/2" Lead-Lined
Cave

Sliding Shelf

Dose Calibrator Not Included

Table Surface
45" W x 27" D

Cabinet Dimensions
48 1/2" W x 28 1/2" D x 36" H
Overall Height 57"

Specifications:

- 4 Casters, 2 Doors, Key-Locked
- 2 Holes Cut Out on the Cabinet
  - 1 for Dose Calibrator Chamber
  - 1 for Lead-Lined Sharps Container
- 3rd Hole for Well Counter Chamber
  (LLMOD-NUC-WC Model)
- Dose Calibrator Readout Unit Shelf
- Pig Holders (4 Pigs)

- 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
  - 12" W x 16" H Viewing Panel 2 mm Lead Glass
- 1/2" Lead-Lined Cave
- Sliding Shelf
- Weight 1200 lbs

LLMOD-NUC   Lead-Lined Cabinet-Shielded Dose Calibrator Chamber & Sharp Shield
LLMOD-NUC-WC   Above Cabinet with Optional Shielding for Well Counter Chamber

Dimensions: 8 3/8" L x 4" D x 9 1/8" H
610R-8   Red Plastic Container, Quantity 8
610R-16   Red Plastic Container, Quantity 16
610R-32   Red Plastic Container, Quantity 32

12

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

SSB3-2M	Bullet Syringe Shield, 3 cc without glass
SSB5-2M	Bullet Syringe Shield, 5 cc without glass
SSB10-2M	Bullet Syringe Shield, 10 cc without glass

With Lead Glass Window

SSB3G-2M	Bullet Syringe Shield, 3 cc with glass
SSB5G-2M	Bullet Syringe Shield, 5 cc with glass
SSB20G-2M	Bullet Syringe Shield, 20 cc with glass

Replacement Glass:

SSB-GLASS-1	Replacement Glass, 3 cc or 5 cc
SSB-GLASS-20	Replacement Glass, 20 cc

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 with glass
NMC-238G-E	Latchkey Syringe Shield, 5 cc with glass

Replacement Glass:

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

Tungsten Syringe Shield
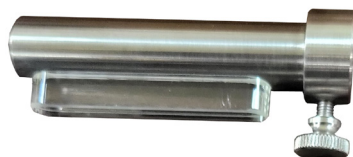
TU-1CC	2mm Tungsten Syringe Shield with Lead Glass, 1cc

Pro-Tec™ II Syringe Shields

- The 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 provides protection and visibility
- A white reflective surface on the shield interior improves viewing of the syringe's markings and fluid content
- 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
000-000N	Replacement Screw for 007-800 & 007-900

Without Lead Glass Window
PTI-800	Syringe Shield, 3 cc without glass
000-TS	Replacement Screw for PTI-800
PTI-900	Syringe Shield, 5 cc without glass
000-000N	Replacement Screw for PTI-900

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

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

Replacement Screw
000-000N	Replacement Screw for Pro-Tec II Syringe Shield

Pro-Tec™ III Syringe Shields

- The barrel of the shield is constructed of 2 mm thick tungsten that reduces radiation exposure from Tc-99m by more than 99% attenuation for Tc-99 tested with TLD chips
- A 5.05 density lead glass window provides protection and visibility
- A white reflective surface on the shield interior improves viewing of the syringe's markings and fluid content
- Safe-T-Lock design grips and securely locks the syringe into place
- Press the quick release button and the syringe freely disengages
- Easily sanitized with alcohol wipes

007-734	Pro-Tec III Syringe Shield, 1 cc with lead glass
007-735	Pro-Tec III Syringe Shield, 3 cc with lead glass
007-736	Pro-Tec III Syringe Shield, 5 cc with lead glass
007-738	Pro-Tec III Syringe Shield, 10 cc with lead glass

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

Color Coded Syringe Labels on page 18

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

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%

007-675	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
- Quick-Turn syringe locking mechanism secures syringe in place
- Lightweight
- No screws, or springs
- Weight: approximately 1.6 oz

PTI-03-1	TommyBoy3 Syringe Shield, 3 cc Blue

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 shielding, colored grip

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

MDP *Color Coded Syringe Labels on page 18*

Clip Style Syringe Shields

- Thumbscrew firmly holds syringe in place
- 2mm Tungsten with Lead Glass Window
-

CS3	Clip Style 3cc Syringe Shield with Lead Glass
CS5	Clip Style 5cc Syringe Shield with Lead Glass
CSLG-3	Lead Glass for Clip Style 3cc Syringe Shield
CSLG-5	Lead Glass for Clip Style 5cc Syringe Shield
000-TS	Replacement Screw for CS3 & CS5

Beta / Gamma Syringe Shield
Suitable for Ra-223 and ideal for Zevalin Y-90

- Lead and plastic shielding, designed for Beta / Gamma
- 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

See Page
For additional Beta Products

007-956	Beta Syringe Shield, 1 cc
007-957	Beta Syringe Shield, 10 cc
007-958	Beta Syringe Shield, 20 cc

ClearView Beta Gamma Syringe Shield

CVBG-3	Syringe Shield, 2mm Lead eq 3cc
CVBG-12	Syringe Shield, 4mm Lead eq 12cc
CVBG-1010	Syringe Shield, 4mm Lead eq 10 cc
CVBG-1020	Syringe Shield, 4mm Lead eq 20 cc
CVBG-1030	Syringe Shield, 4mm Lead eq 30cc
CVBG-1-Cu-67	Syringe Shield, 4mm Lead eq 1cc
CVBG-3-Cu-64	Syringe Shield, .25" Lead eq 3cc
CVBG-5-Cu-64	Syringe Shield, .25" Lead eq 5cc
CVBG-5-2mm	Syringe Shield, 2mm Lead eq 5cc
CVBG-5060Cu	Syringe Shield, .25" Lead eq 50/60cc
CVBG-5060Lu	Syringe Shield, 4mm Lead eq 50/60cc
CVBG-SCREW	Replacement Screw for ClearView Syringe Shields

Tungsten Beta/Gamma Syringe Shields

- Tungsten & Plastic with Lead Glass Window

BG-10CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 10cc for BD Syringes
BG-12CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 12cc for Monoject Syringes
BG-20CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 20cc for BD Syringes
BG-30CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 30cc for BD Syringes
LG1020	Lead Glass Replacement for 10 & 20 cc Syringe Shields

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
- A thumbscrew holds the syringes firmly in place

Without Lead Glass Window

007-985	Syringe Shield, 3 cc without glass
007-990	Syringe Shield, 5 cc without glass
007-995	Syringe Shield, 10 cc without glass
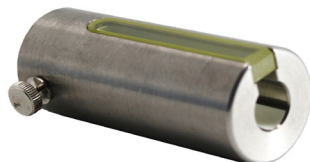
With Lead Glass Window

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 Screw

000-PET	Pro-Tec PET Replacement Screw

Replacement Glass

007-974	Pro-Tec PET Replacement Glass

PET Syringe Shields for HSW/Norm Ject Syringes

- Available with or withough Lead glass window

- 9mm tungsten

3HSW	3cc Syringe Shield for HSW/Norm Ject Syringes, No Lead Glass
5HSW	5cc Syringe Shield for HSW/Norm Ject Syringes, No Lead Glass
3HSW-G	3cc Syringe Shield with Lead Glass for HSW/Norm Ject Syringes
5HSW-G	5cc Syringe Shield with Lead Glass for HSW/Norm Ject Syringes
12HSW-G	12cc Syringe Shield with Lead GLass for HSW/Norm Ject Syringes

50 / 60 cc Syringe Shield
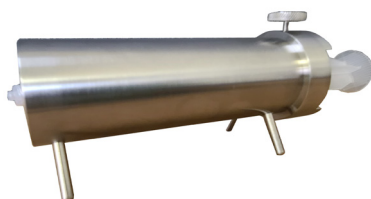
- 9mm Tungsten
- 4 Legs to prevent rolling
- Screw locks syringe in place
- 5.75" L x 1.875" D x 3.25" H (height to screw)
- Weight: 6.6 lbs

60-09T	50/60 ml, 9mm Tungsten Syringe Shield
PET-14SC	Replacement Screw for 60-09T

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

MDP	MAA	SC	DTPA	GH	Tc04	PYP
212-001 Purple	212-002 Light Orange	212-003 Yellow	212-004 Olive Green	212-005 Red	212-006 Pantone Purple	212-007 Blue
Ga	Tl		HIDA	HDP	MIBI	DMSA
212-008 Orange	212-009 Reflex Blue	212-011 Unmarked White	212-012 Brown	212-013 Purple	212-014 White	212-015 Green
MAG-3	I-131	CARDIOLITE	CHOLETEC	Tc RBC	MYOVIEW	Neurolite
212-016 Blue	212-017 White	212-019 Pink	212-023 Orange	212-026 White	212-027 White	212-028 White
In-111	Saline	FDG	Ga68	F18	Cu68	Lu177
212-030 White	212-031 White	212-032 White	212-033 Yellow	212-034 Yellow	212-035 Yellow	212-036 Yellow

Select item number

Roll of 500

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, 9mm 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
BUPET10   PET Bullet Syringe Shield, 10 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-PG1   Replacement Glass, 3 cc or 5 cc
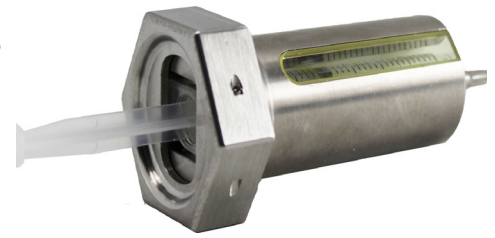
Z-PET Syringe Shield

- Constructed of .55 thick (14 mm) tungsten, attenuates FDG F-18 by 97%
- Accommodates standard 3 and 5 cc syringes

PET14-3C   Syringe Shield, 3 cc

PET-14SC   Replacement Screw for PET14-3C

007-945   Syringe Shield, 5 cc

000-ZPET   Replacement Screws for 007-945

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
007-711	Gaard Lock Syringe Shield, 3 cc without glass
007-712	Gaard Lock Syringe Shield, 5 cc without glass
007-713	Gaard Lock Syringe Shield, 10 cc without glass

PET/MRI Syringe Shield

- MR Conditional for 3T
- Constructed of 9 mm tungsten
- 5.6 high density flush mounted lead glass window

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

MRI Compatible Syringe Shield for PET

MRI Compatible Syringe Shield for PET with Nylon Screw

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

PET 20mL Syringe Shield

- 9mm Tungsten Shielding
- Weight: 3.25 lbs
- Length: 3.5 inches
- Feet to prevent rolling

20-09T	PET 20mL Syringe Shield, 9mm Tungsten, without Glass

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

Dose Drawing Syringe Shields

- Reduce hand exposure
- Optically clear high density lead glass barrel
- Offers 360° visibility and reduces radiation exposure
  from Tc-99m by more than 99%
- Features quick and smooth syringe insertion with an O-ring
  seal and anti-roll cap
- Accommodates luer and non-luer lock syringes

<div align="center">Dose Drawing Syringe Shields</div>

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

<div align="center">Dose Drawing Syringe Shields with Replaceable Glass</div>

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

<div align="center">Replacement Glass</div>

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
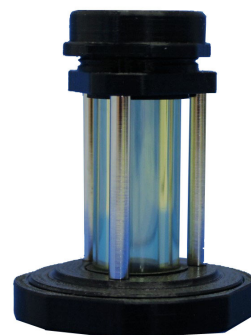
High Density Lead Glass Syringe Shields

- Optically clear high density (5.6) lead glass barrel
- Offers 360° visibility and reduces hand exposure from Tc-99m by more than 99%
- Accommodates luer and non-luer lock syringes

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

Dose Drawing Syringe Shield for PET

The needle end of the syringe shield has a tungsten disc that protects the user's hands during the dose drawing procedure. There are 2 pins in the end disc that secure the shield to the drawing station. This allows single handed dose removal from the drawing station. The syringe shield has a tungsten thickness of .315"
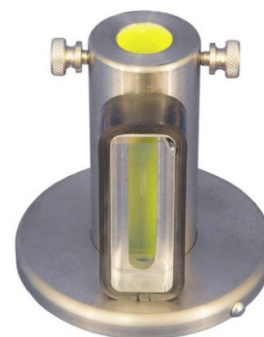
0665-2017	Dose Drawing Syringe Shield for PET, 5cc
0665-2018	Dose Drawing Syringe Shield for PET, 20cc

Tungsten Shield for Medrad® Automated Solaris Injector

3mm Tungsten
Height: 1 7/8"
Width: 1 11/16"
Inside Diameter: 1 1/4"
Bottom Hole Diameter: 1/2"
Weight: 0.7 Lbs

TS-MED   Tungsten Shield for Medrad® Automated Solaris Injector with Screw
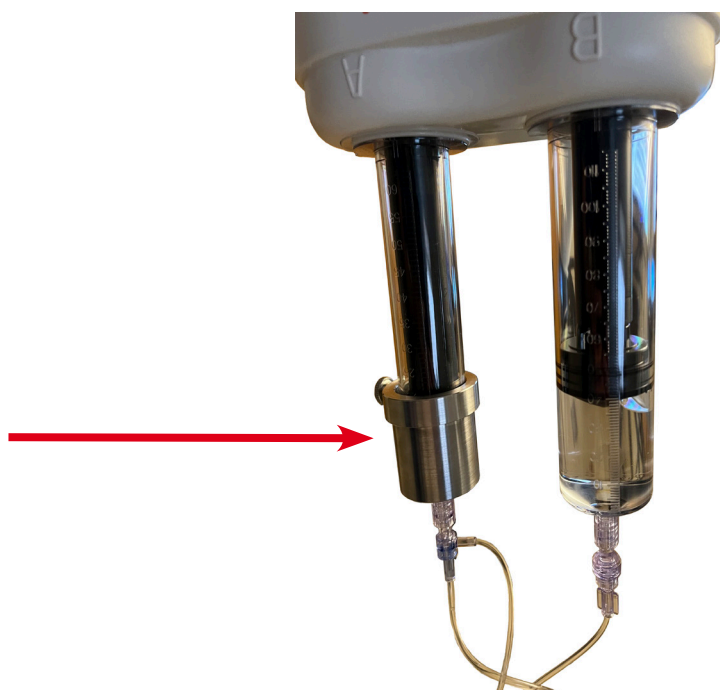
Lead-Lined Storage Container

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   Lead-Lined Storage Container, .125" Lead

Exterior Dimensions: 7" H x 6" Dia
Interior Dimensions: 6.25" H x 5.5" Dia

DJ-202-25   Lead-Lined Storage Container, .25" Lead
Exterior Dimensions: 7" H x 6" Dia
Interior Dimenrions: 5 7/8" H x 5 1/8" Dia

PC-201   Plastic Insert for DJ-202, 12/bx

Veinlite LED+®

The Veinlite LED+ offers an optimum viewing area and the highest contrast for vein imaging. The wide C-shaped design stretches the skin for easy needle insertion and stops the vein from rolling during access.

- 28 bright light emitting diodes (LEDs)
- 22 Orange LEDs for superficial veins
- 6 Red LEDs for deeper veins, darker skin
- 27 mm area of illumination

Dimensions: 3.75" L x 2" W x 1" Thick
Power: Rechargeable lithium-ion battery
Weight: 3 oz

007-275-P   Veinlite LED Plus
Includes: 50 disposable plastic covers, battery charger, light shield and pediatric adapter

007-276-P   Replacement disposable plastic covers, 50/pkg
For Original Veinlite LED and Veinlite LED Plus

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 and 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
- Powder coated finish

Dimensions: 6.875" H x 4" Base Diameter
Weight: 7.65 Lbs

009-205   Shielded Syringe Holder

Big Digit Timer

- Basic digital timer with extra-loud alarm and large display
- Counts 100-minute by minute/second
- Last count recall, stop and restart functions
- Made of food-safe ABS plastic

NMC-BDT   Big Digit Timer

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
- 3 prong commercial cordset

Dimensions: 11.5" W x 14" L x 3" H
Weight: 7.2 lb
Power Requirements: 120 volts
                              1500 watts

PCR1   Cast Iron Electric Hot Plate

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

Lead-Lined Syringe Carriers

Two sizes, each offered in 1/8" and 1/4" lead shielding for added protection

001-179   Syringe Carrier, Large, Weight 11.3 Lbs
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 1/8" thick, Ends: 1/4" thick

001-181   Syringe Carrier, Small, Weight 7.5 Lbs
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 1/8" thick, Ends: 1/4" thick

For PET

001-180   Syringe Carrier, Large, Weight 17 Lbs
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 1/4" thick, Ends: 1/2" thick

001-182   Syringe Carrier, Small, Weight 11 Lbs
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 1/4" thick, Ends: 1/2" thick

DS-179   Dose Sleeve for 001-179, 4/Box
DS-181   Dose Sleeve for 001-181, 4 / Box
DS-180   Dose Sleeve for 001-180, 4/Box
DS-182   Dose Sleeve for 001-182, 4/Box

Stainless Steel Syringe Carrier

- Constructed of stainless steel inside and out, completely enclosed lead, *Not painted*
- The lead walls are poured between the stainless steel so there is no exposed lead
- Used to store and transport syringes, vials or ampoules
- The lid is overlapping with a latch to prevent streaming and opens 180°

NMC-220R   Stainless Steel Syringe Carrier, 1/8" Lead
I.D. 9" L x 2" W x 2" H   O.D. 10.75" L x 3" W x 2.625" H
Lead Shielding: Sides, top, bottom 1/8" thick   Ends: 1/4" thick
Weight: 10.5 lb

NMC-225-18   Stainless Steel Syringe Carrier, 1/8" Lead
I.D. 12" L x 3" W x 2" H   O.D. 13.875" L x 4.25" W x 2.75" H
Lead Shielding: Sides, top, bottom 1/8" thick Ends: 1/4" thick
Weight: 15.8 lb

NMC-225-14   Stainless Steel Syringe Carrier, 1/4 Lead
I.D. 12" L x 3" W x 2" H   O.D. 14.25" L x 4.25" W x 2.75" H
Lead Shielding: Sides, top, bottom 1/4" thick Ends: 1/2" thick
Weight: 26.5 lb

DS-220R   Dose Sleeve for NMC-220R, 4/Box
DS-225-18   Dose Sleeve for NMC-225-18, 4/Box
DS-225-14   Dose Sleeve for NMC-225-14, 4/Box

Lead Lined Syringe Carrier

- Outer Dimensions: 7.875" H (with Handle) x 10.5" L x 4" W
- Inner Dimensions: 9" L x 3.125" W x 3" H
- Weight: 10 Lbs
- 1/8" Lead Shielding

0670-0007   **Lead Lined Syringe Carrier**

DS-0670   **Dose Sleeve for 0670-0007, Set of 4**
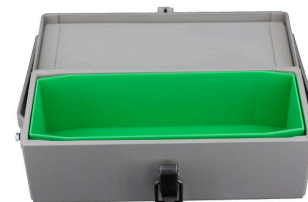
PET Transporter Syringe Carrier

- Outer Dimensions: 7 7/8"H x 10 1/2"L x 4"W
- Inner Dimensions: 8 1/4"L x 3 1/16" W
- Weight: 12 Lbs
- .125" Lead on top, bottom, front and back with .5" on ends

0670-2026   **PET Transporter II Lead Lined Syringe Carrier**

Dose Sleeves for Syringe Carriers

- Custom fit to your syringe carrier
- Can be cleaned easily with alcohol or bleach between injections
- Easily replaced if sleeve is contaminated

DS-179   **Dose Sleeve for 001-179 Syringe Carrier, 4/Box**

DS-180   **Dose Sleeve for 001-180 Syringe Carrier, 4/Box**

DS-181   **Dose Sleeve for 001-181 Syringe Carrier, 4/Box**

DS-182   **Dose Sleeve for 001-182 Syringe Carrier, 4/Box**

DS-220R   **Dose Sleeve for NMC-220R Syringe Carrier, 4/Box**

DS-225-18   **Dose Sleeve for NMC-225-18 Syringe Carrier, 4/Box**

DS-225-14   **Dose Sleeve for NMC-225-14 Syringe Carrier, 4/Box**

DS-0670   **Dose Sleeve for 0670-0007 Syringe Carrier, 4/Box**
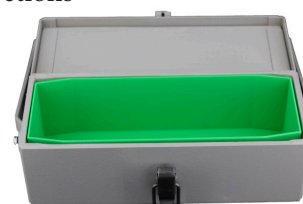
Mini Tabletop Shield

PTI-016   Mini Shield, 1/2" lead, 1.8mm lead equiv. glass
Includes 2 Lead Glass Plates

Dimensions: 11" W x 11 3/4" D x 15 7/8" H
Weight: 24 lbs
Viewing Panel: Lead Glass 1.8mm Lead Equivalency x 2 8" x 10"

Optional Shielding:
PTI-017   Mini Lead Glass Plate, 1.8mm lead equiv. glass, 8" x 10"   6 lbs
PTI-018   Bottom Shield, 1/4" lead   8 lbs
PTI-019   Side Shield, 1/4" lead   22 lbs
Dimensions: 12.25" W x 12" D x 10" H Back - 6" H Front

PTI-016

Standard Beta/Gamma Tabletop Shield

BG-TS   Standard Beta/Gamma Shield
1/2" lead inside front
1/2" High density polypropylene
With 3.6mm lead equiv. glass 12" x 12"

Dimensions: 14 1/2" W x 16 11/16" D x 20" H
12" x 12" Lead Glass
Weight: 63 lbs without Bottom Lead Shielding
100 lbs with Bottom Lead Shielding

BG-TS

Optional Shielding:
BG-226   Bottom Shield, 1/4" lead   40 lbs
BG-227   Side Shield, 1/4" lead   42 lbs
BG-228   Lead Glass Plate, 3.6mm lead eq., 12" x 12"   10 lbs

15° Lead Glass Tabletop Shields

- Lead equivalency of 1.8 mm

16A-129-LG   Mini Clear Lead Glass Tabletop Shield
12" H x 9" W X 8" D, 15 lb
16A-1812-LG   Standard Clear Lead Glass Tabletop Shield
18.125" H x 13" W x 8" D, 18 lb
16A-2415-LG   Jumbo Clear Lead Glass Tabletop Shield
24" H x 16" W x 8" D, 39.5 lb
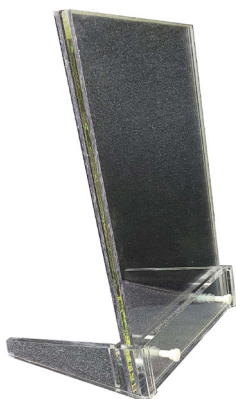
L-Block for Nuclear Medicine

- 0.5" Lead in the bottom and front of unit
- Lead Glass 12" x 12"
- 3.6mm Lead Equivalency
- Bite Cut Out for Dose Calibrator Chamber
- Width: 13.75"
- Depth: 10.25"
- Height: 19.125"
- 75 lbs total including lead glass
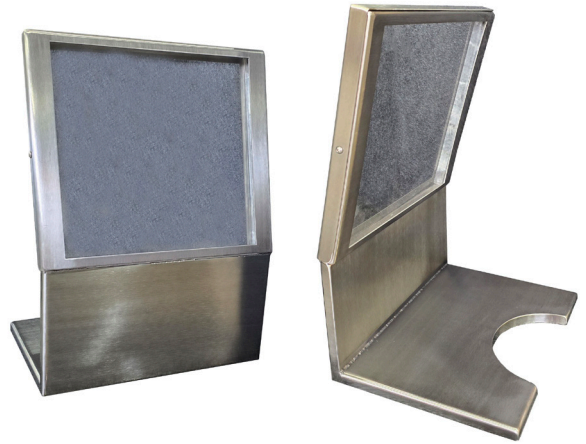
NMLB-BCO L-Block for Nuclear Medicine with Bite Cut Out

Standard L Block Shield

- Dimensions: 26" H x 18.5" W x 18.5" D

- .5" Lead Shielding

- Weight: 100 lb

- The lead glass of the Standard L Block Shield is 1/4" thick, which is equivalent to 1/16 inches of lead thickness

- Density of lead is 11.34 g/cm³

5130-2090	**Standard L Block Shield for Nuclear Med**
7310-1305	**Side Shields for Standard "L" Shield**

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 10 ml 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
- Inner Dimensions: 1.05" Diameter x 2.24" 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

001-075	Vial Shield, .12" lead equiv

Hamilton Vial Heating Shield

Dimensions:
Tungsten Thickness: Wall/Bottom 4.25 mm
                     Top 3.3 mm

Inner Diameter: 26.5 mm
Inner Height: 5.57 mm
Weight: 1.05 lb

T251   Hamilton Vial Heating Shield

Tungsten Magnetic 10 ml Vial Shield

- Designed to hold a 10 ml vial
- Convenient Magnetic Cap is easy to remove and replace

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

Magnetic Cap Dimensions: 39 mm x 7 mm
Weight :   .26 lb

T208   Tungsten Magnetic Vial Shield, 10 ml

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 it's shape under the roughest handling and is virtually unbreakable.   Features include a removable 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

Magnetic Cap Dims: 38 x 8 mm
Weight: .25 lb

Removable Bottom

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

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

29

Tungsten Magnetic 30 ml Vial Shield

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

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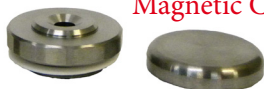
Magnetic Cap

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

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

T205   Tungsten Vial Shield, 30 ml

Tungsten Magnetic 30 ml Drax® Vial Shield

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

- Convenient easy to remove and replace Magnetic Cap
- Tungsten thickness of 7 mm

Dimensions:
Total Height: 3.5"
Tungsten Thickness: 7 mm
Inside Diameter: 42.5 mm
Weight: 3.8 lb

Magnetic Cap

T-D30   Tungsten Magnetic 30 ml Drax Vial Shield

1" Lead Vial Shield - 50 ml

This vial shield is designed to hold a 50 ml vial

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

Dimensions:
Total Height: 6.3"
Internal Height   4"
Lead Thickness: 1"
Outer Diameter: 3.8"
Inside Diameter: 1.8"
Weight: 25 lbs

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

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

Easy-Grip Tungsten Vial Shield

- Unique grip mechanism improves handling
- Magnetic injection port lid is ergonomically designed to minimize exposure with single handed manipulations
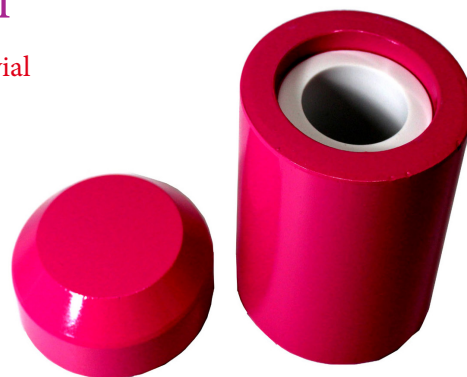- Available for 10 ml or 30 ml vials
- 95% Tungsten

Dimensions:	10 ml	30 ml
Total Weight:	2.46 lb	4.49 lb
Total Height:	2.9"	3.7"
Inner Size:	0.94" Diameter	1.5" Diameter
Shielding:	5 mm Tungsten	5 mm Tungsten

053-T10

053-T30

053-T10	Easy-Grip Tungsten Vial Shield, 10 ml
053-T30	Easy-Grip Tungsten Vial Shield, 30 ml

Ga⁶⁸ Elution/Compounding Vial Shield

- Unique grip mechanism improves handling
- Designed for optimum radiation protection during elution/compounding/dispensing processes
- Compatible with all commercially available Ge-68/Ga-68 generators
- 95% Tungsten

Dimensions:
Total Weight:	12.8 lb
Total Height:	3.95"
Inner Size.:	1.03" Diameter
Shielding:	2.25 cm Tungsten

053-CVS   **Ga68 Elution/Compounding Vial Shield**

Vial Shield

Designed to aid in the preparation of pharmaceuticals that require boiling. Vents are located to minimize scatter leakage, boiling water can circulate freely around the vial, heating the solution rapidly and uniformly. The carrying handle makes it easy to lower and remove the vial from the boiling water bath.

- 5.6 density flush mounted lead glass window
- .25" lead shielding
- 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

PET Vial Shield with Handle

Shielding:	20mm Tungsten
Container Height:	6.375" with Handle, 4.5" handle down
Outer Diameter:	2.875"
Inner Dimensions:	1" Diameter x 2" H
Weight:	18.1 Lbs

For internal transport within a facility.
It has not been approved for transport by road or air.

PVH   PET Vial Shield with Handle
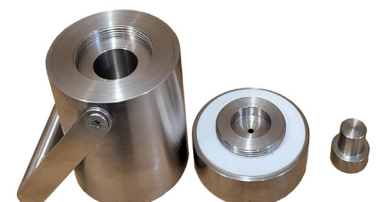
Unit Dose Wall Rack for Biodex or GE Pigs

- Constructed of Stainless Steel
- 6 mounting holes to securely attach to your wall
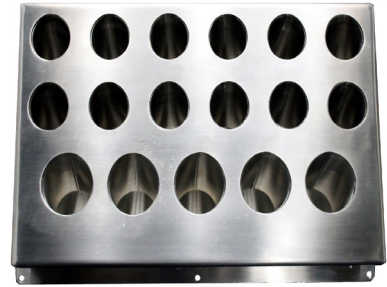
NMC-BIOPIG or NMC-GEPIG
Specifications:
Dimensions: 28" W x 17.5" H x 3.5" D
Weight: 22 lb
Holds: 27 Biodex or GE pigs up
                    to 2.5" diameter

NMC-MULTIPIG
Specifications:
Dimensions: 19.75" W x 12.75" H x 4.25" D
Weight: 29 lb
Holds: 12 Biodex pigs 2" diameter and
                    5 GE pigs 2.5" diameter

NMC-BIOPIG	Unit Dose Pig Wall Rack for Biodex Pigs
NMC-GEPIG	Unit Dose Pig Wall Rack for GE Pigs
NMC-MULTIPIG	Unit Dose Pig Wall Rack for Biodex and GE Pigs

Unit Dose Pig Wall Rack

- Holds up to 25 pigs up to 2.25" diameter
- Improves work space with its pigeonhole design and reduces unnecessary handling
- 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" diameter
- Lightweight, only 6 lb
- 16.5" W x 16" L x 3.25" H

NMC-PHSS   Stainless Steel Unit Dose Pig Holder

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" Diameter
  Size: 14.75" L x 5.75" W x 4.75" H
  Weight: 3.1 lb

PTI-SSH   Universal Unit Dose Carrier

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
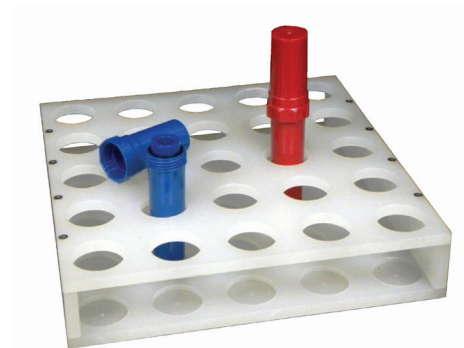- Weight: 2.8 lb

001-284   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
- Dimensions: 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

Phlebotomy Chairs

Weight Capacity: 300 lbs

Color: Blueridge Vinyl

NMC-8572

Includes Dual Pivot Arms

NMC-8573

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"

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"

X-Large Phlebotomy Chairs

Weight Capacity: 450 lbs

Color: Blueridge Vinyl

NMC-8574XL

Includes Dual Pivot Arms

NMC-8575XL

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"

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"

XX-Large Phlebotomy Chair

Weight Capacity: 700 lbs

Color: Blueridge Vinyl

NMC-66002RB

Overall Height: 33"
Overall Width: 53"
Seat Height: 20"
Seat Width: 35"
Seat Depth: 21"
Adjustable Armrests: 33"-39"

Adjustable Height Phlebotomy Chair

Weight Capacity: 300 lbs
Color: Blueridge Vinyl

NMC-6320

Overall Width: 38"
Seat Height: 20.25" to 27.5"
Seat Width: 21"
Seat Depth: 19.5"
Adjustable Armrests: 7" Range

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
NMC-66002RB	XXL Padded Phlebotomy Chair with drawer
NMC-6320	Adjustable Height Phlebotomy Chair with draw

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

Injection / Resting Chair

214-210

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

- Dual fold down side tables
- Trendelenburg release
- Total-lock & directional steel locking casters
- Removable side panels for easy cleaning
- Ideal for PET

Specifications:
Seat Height: 21"
Seat Width: 25"
Seat Depth: 20"
Overall Height: 49"
Overall Width: 36.25"
(Add 9.25" to overall width for each raised side table)
Seat Back Height: 31.5"
Upright Depth: 44"
Overall Length (reclined): 76.5"
Upholstery meets AB2998 flammability requirements

Weight: 111 lb
Weight capacity: 450 lb
214-210   Injection/ Resting Chair

Injection Stand

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

- Clear plastic armrest rotates 180°
- Cradle design holds the patient's arm firmly in place
- Adjacent utility tray for supplies and includes Multi-Syringe Holder, which accommodates up to four syringes
- Adjustable: Height: 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

Treatment Recliner

NMC-6240

- Swing arms eases patient transfer
- Infinite position backrest
- 5" Casters with footplate
- Push Handle
- Easy to clean
- One side table included

Specifications:
Seat Depth: 20.75"
Seat Back Height: 28.5"
Armrest Height: 32.5"

Footprint Upright Length: 41.5"
Footprint Recline Length: 75.5"
Arm-Span (Swing Arms):   105.75"

Upholstery: Taupe
                          Meets AB2998 Requirement

Weight: 199 lb
Weight capacity: 500 lb
NMC-6240   Treatment Recliner

Imaging Chair

214-610

- 360° swivel range
- Lockable casters
- Adjustable height from 41" to 48"
- 2" foam with gray vinyl cover

Specifications:
Seat Dimensions: 17" x 11" deep
Seat Back Height: 19"
Seat Height Adjustable: 19" to 26"

Upholstery: Gray vinyl cover
Finish: Black baked enamel

Weight: 75 lb
Weight capacity: 350 lb
214-610   Imaging Chair

Model 3400 Graseby Syringe Pump

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: 5 ml, 10 ml, 20 ml, 30 ml, 50/60 ml
- Simple operation: Menu driven display
- Cost effective: No dedicated disposables
- AC or battery operated   (Internal rechargeable battery)
- Accurate: ± 2%
- RS 232 Communications
- Open communications protocol to allow the pump to be remotely controlled and/or monitored

Specifications:

AC Power Supply:	100-240 V, 50/60 Hz, 40 VA
Battery Type:	Sealed Lead Acid (Cyclon)
Battery Life:	10 hours (fully charged at 400 ml/hr)
Syringe Types:	BD Plastipak 5, 10, 20, 30, 50/60 ml Braun Omnifix 5, 10, 20, 30, 50/60 ml
	Braun Perfusor 50 ml (optional) Sherwood Monoject 5, 10, 20, 30/35, 50/60 ml
	Terumo 5, 10, 20, 30/35, 50/60 ml Fresenius Injectomat 50ml
	IMS Pumpjet 30 ml (prefilled)
Flow Rate:	Maintenance infusion: 0.1- 400 ml/hr, in 0.1 ml increments
Bolus infusion:	0.1-1200 ml/hr, in 0.1 ml increments
	Mass unit programming
	Volume infused counter
	0-999.9 ml (in 0.1 ml increments)
Weight:	Not exceeding 8 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
Drive Accuracy:	± 2%

Model 3400   Graseby Pump

Graseby 3400 Syringe Pump, Used - In Like-New condition with 1 Year warranty from factory trained technicians

Model 3400 Infusion Sets

MC6016T   60" Microbore Non-DEHP extension set with male luer lock, T-connector with pinch clamp.
Approx. priming volume 1.6ml, latex/freon free. 50 sets/case

N0007   60" Microbore Non-DEHP extension set with male & female luer locks and pinch clamp.
Approx. priming volume 1.2 ml, latex/freon free. 100 sets/case

MC0603   6" Microbore Non-DEHP extension set with rotating male luer lock, T-connector, pinch clamp.
Approx. priming volume 0.3 ml, latex/freon free. 50 sets/case

ClearView Infusion Pump Shield

Specifications:

- 1" Thick ClearView
- Fits Medfusion, Graseby, Moog Pumps, and more
- 100 lbs
- Interior Dimensions: 19"W x 8.75"D x 7"H
- Exterior Dimensions: 26"W x 13.75"D x 9.2"H
- 0.3" Lead Equivalency

PTI-CVIPS   ClearView Infusion Pump Shield

Crate / Freight

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

Graseby Injection Pump Shield

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

Stainless Steel Interior and Exterior

- .5" Lead Shielding with Stainless Steel exterior
- Lead glass window with clear visibility of syringe
- Overall Dimensions: 22 1/16" W x 10 7/8" D x 7"H
- Inner Dimensions: 14 1/2" W x 7"D x 5"H
- Weight: 107 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

Integrated L-Block

- .5" Lead Thickness in Front
- 12.5" W x 16" H
- 12" x 12" Leaded Glass
- 12" x 12" Polycarbonate

Stationary Box to Hold Syringe Pump

- .5" Lead Thickness on Front, Top and Bottom
- 1" Lead Thickness in Back
- 2" Lead Thickness on both Sides
- Pull-out Drawer located on side with push handle
- Heavy Duty Casters with Brake
- Dimensions: 24" W x 18.25" D x 44.125" H (add 4.5"W to include handle)
- Heavy Duty Lockable Sock for Lifting Lid
- Total Weight: 771 Lbs

GPC   Graseby Pump Cart with Injection Pump Shield
                 With Non-Removable Injection Pump Shield
                 Note: Graseby Syringe Pump sold separately

Medfusion Injection Pump Shield

Designed to reduce exposure during the injection of radionuclides that require an infusion protocol using Medfusion 4000 Syringe Injection Pump

Stainless Steel Interior and Exterior

- .5" Lead Shielding with Stainless Steel exterior
- Lead glass window with clear visibility of syringe
- Window Dimensions: 10" W x 2.5" H x .31" Thick
- Inner Dimensions: 18.5" W x 6.5625" H x 8.75"D
- Overall Dimensions: 27.875" W x 9.3125" H x 10.25" D
- Weight :   175 lb

007-MEDF   Injection Pump Shield for Medfusion 4000
                Note: Medfusion Syringe Pump Sold Separately

Medfusion Pump Cart with Injection Pump Shield

Pump Cart and Pump Shield

- .5" Lead Thickness on Front, Top and Bottom
- 1" Lead Thickness in Back
- 2" Lead Thickness on both Sides
- Pull-out Drawer located on side with push handle
- 6" Casters (2 Swivel, 2 Locking)
- Dimensions: 32.25" W x 43.5" H x 20" D

Sliding L-Block

- 12.5" W x 15.5" H
- (2) pieces 12" x 12" Leaded Glass

Injection Pump Shield
Is Removable

MPC   Medfusion Pump Cart with Injection Pump Shield
               With Removable Injection Pump Shield
                Note: Medfusion Syringe Pump is sold separately

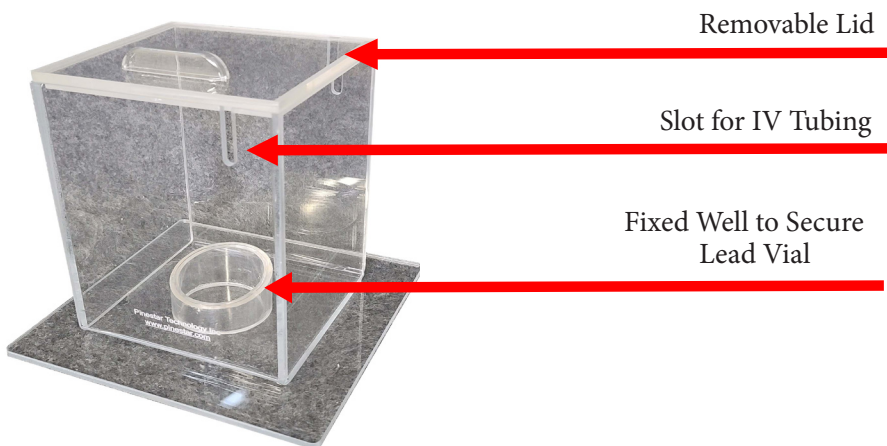Call Pinestar toll-free 1-800-682-2226, to place an order

Lu-177 Lutathera® Dose Delivery Box

Box Dimensions

- 6.5"L x 6.5"W x 8"H
- 9.5" x 9.5" Base
- 6 mm thick clear acrylic
- 1.5" x .25" Slots
- Weight: 2.85 lbs
- Effectively blocks Beta emissions

Inner Well Dimensions

- 1"Front - 1.5" Back Height
- 2.5" Diameter

Removable Lid

Slot for IV Tubing

Fixed Well to Secure Lead Vial

IV Tubing From Bag

IV Tubing To Patient

Lead Vial

PTI-CAP

Survey Meter Not Included
Lead Vial Shield Not Included

PTI-LDDB   Lutathera Dose Dispensing Box

PTI-CLS   Cylinder Lead Shield 1/4" Lead for Vial
PTI-CAP   Vial Riser
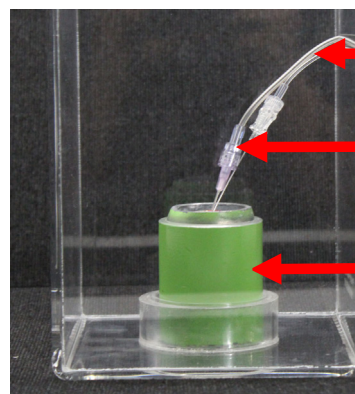
ClearView RS* Lu-177 Dose Administering Shield

- 3.6mm Lead Equivalency
- Fits 20 and 30 ml vials
- 7 Lbs
- 6.75" H x 4.75" D
- 6mm thick acrylic

PTI-LDAS   ClearView RS* Lu-177 Dose Administering Shield

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

Lead-Lined Dual Box
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 Box 1/8" lead, Wt 47 lb
610R (8,16,32)	Red Plastic Container,
Dimensions:	8 3/8" L x 4" D x 9 1/8" H
610R-8	Red Plastic Container, Quantity 8
610R-16	Red Plastic Container, Quantity 16
610R-32	Red Plastic Container, Quantity 32

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
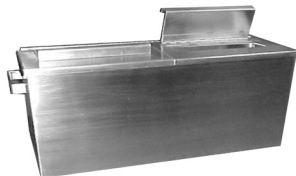- Hinged top with handle and lock
- 3 " drop hole with lead cover

Dimensions:	10 1/2" W x 6 1/2" D x 14 7/16" H with lid
Weight:	195 lb

610-1PH	1" Lead PET Container Shield

610R (8,16,32)	Red Plastic Container,
Dimensions:	8 3/8" L x 4" D x 9 1/8" H
610R-8	Red Plastic Container, Quantity 8
610R-16	Red Plastic Container, Quantity 16
610R-32	Red Plastic Container, Quantity 32

Lead-Lined Dual Box

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

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

SCS-125 Specifications:
Outer Dims: 14.5"W x 7.25"L x 12.25"H
Inner Dims: 11 3/8"W x 7"L x 11 6/8"H
Shielding: .125" Lead
Security: Key-locked
Finish: Powder coat
Weight: 51 lbs
Uses Sharps Containers:
039-338, 039-388, 039-387

039-326 High Energy Sharps Container Specifications
Inner Dims: 7" L x 11.38" W x 11.25" H
Outer Dims: 9.19" L x 15.25" W x 13.31" H
Lead Shielding: .5" thick
Security: Key-locked
Finish: Powder coat
Weight: 160 lb

SCS-235 Dual Shield Specifications:
Outer Dims: 12" W x 7.375" L 16.75" H
Inner Dims: 11.5" W x 7" L x 14.875" H
Shielding: .125" Lead
Finish: Powder coat
Weight: 60 lb
Sharps Containers:
Uses two 039-338

SCS-125	Sharps Container Shield, 1/8" lead
SCS-235	Dual Sharps Container Shield, 1/8" lead
039-326	High Energy Sharps Container 1/2" lead

039-338	Monoject Container, 4 qt, 10/pkg Fits SCS-125, 039-326, SCS-235 and SCS-255
039-387	Monoject Container, 8 qt, 10/pkg
039-388	Monoject Container, 8 qt, 20/pkg Fits SCS-125, 039-326, SCS-255 and SCS-235
NMC-182	Sharps Container, 6.2 qt, 12/pkg Fits SCS-225

Sharps Container Shields
For Beta and Gamma Radiation

SCS-255 Specifications:
Outer Dims: 11" D x 14" W x 15" H
Inner Dims.: 7.125" D x 12" W x 12" H
Shielding: .125" lead, 0.5" Plastic
Security: Key-locked
Finish: Powder coat
Weight: 78 lbs
Sharps Container: 039-338, 039-387, 039-388

- 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 0.5" Plastic which attenuates gamma radiaion, beta radiation and errant bremsstrahlung

SCS-255	Sharps Container Shield, Beta/Gamma
039-338	Monoject Container, 4 qt, 10/pkg
	Fits SCS-125, 039-326, SCS-235 and SCS-255
039-387	Monoject Container, 8 qt, 10/pkg
039-388	Monoject Container, 8 qt, 20/pkg
	Fits SCS-125, 039-326 and SCS-255

We also carry PET Sharps Containers See page 84
Call Pinestar toll-free 1-800-682-2226, to place an order

Pro-Tec™ Unit Dose Pig

- Accommodates the following syringes:

  BD: 3 cc, 5 cc, 10 cc   BD Safety-Lock: 3 cc

  Monoject: 3 cc, 6 cc   Monoject Safety: 3 cc

- .25" lead shielding
- Overlapped lead eliminates streaming
- Lead is fully encapsulated in Lexan
- Durable and compatible with automatic washing equipment
- O-ring seal protects against leakage
- Dimensions: 8.5" H x 1.94" Diameter Weight: 3 lb
- Available Colors: Red, White, Blue

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 See Page 68

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
- Meets IATA Dangerous Goods Regulations, 58th Edition Sections 5.0.4.3, 10.5, and 10.6.1 thru 10.6.3.5
- 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
001-757	Type II Placard, 100/pkg
001-779	Covers, hook & loop fasteners, plastic
	Large, 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
001-707	Vial Pig Adapter

Shipping Container for PET Vial Pig, see page 85-86

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 Including Lid (31 1/2" H w/ dolly)

- **Lid:** 19" Diameter
  Includes two heavy-duty handles

- **Drop Port:** 4.5" Diameter
  Includes cap with handle

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, 1047 lbs

Shielded Decay Drum with Dolly

- **Outer Dimensions:** 14" Diameter x 20.5" H
- **Inside Dimensions:** 12.75" Diameter x 17" H
- **Stainless Steel Wrapped Exterior**
- **Lead shielding:** 1/2" thick
- **Lid:** 17" Diameter
  7" x 7" Opening
  Includes two heavy-duty handles
- **Capacity:** 10 gal

PTI-1012   Stainless Steel Decay Drum, 10 Gallon, 1/2" lead w/Dolly, 265 lbs

Waste Container Drums with Dolly

- Stainless steel inside and painted outside
- Lead lined stainless steel lid with handles
- 7" x 7" Opening

PTI-3014   30 Gallon, 1/4" Lead, 19" Dia x 32" H (36.5" H w/ dolly),   290 lbs

PTI-5514   55 Gallon, 1/4" Lead, 24" Dia x 35" H (39.5" H w/ dolly), 469 lbs
                  Inside Dimensions: 22.25" Diameter x 33.25"H

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 lined with .125" lead
- Can be placed on floor or counter
- Plastic liners make it easy to transfer waste to a decay or disposal site

Specifications:
Outer Dimensions: 11.9" W x 9.9" D x 15.25" H
Shielding: .125" Lead
Finish: Stainless Steel
Capacity: 20 quart
Shipping Weight: 51 lb

039-106   Lead-Lined Waste Container, .125" lead
                      Includes 1 pkg of 20 Poly Liners
040-108   Poly Liner, 20/pkg

Waste Container with Foot Pedal

- Foot pedal operation
- Adjustable pressure valve to reduce or increase lid closure speed
- Reduce the posibiltiy of handle contamination
- Includes all of the features of 039-106

Specifications:
Outer Dimensions: 13.5" W x 12.5" D x 16.5" H
Shielding: .125" Lead
Finish: Stainless Steel
Capacity: 20 quart

FP-039   Waste Container with Foot Pedal, .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
- Container top is easily removed with side handles

Specifications:
Outer Dimensions: 12" W x 22" H x 9" D
Inner Dimensions: 10.5" W x 14.5" H x 8.5" D
Shielding: .25" Lead, .063" Aluminum
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/pk

19 Gallon Rolling Shielded Waste Container

- Lead sheilding on all six sides
- 8" Diameter top chute with shielded cover
- Casters
- Stainless steel inside & outside
- Interior Dimensions 16"W x 16"D x 25"H
- Accommodates 19 gallon waste container, Model # PTI-19WC

NMC-19RSWC14   19 Gal. Rolling Shielded Waste Container
                1/4" Lead, 19"W x 19"D x 36.75"H, 250lbs

PTI-19WC   19 Gallon Waste Container, 5 Units per Box

Custom Lead-Lined Box

- Stainless steel interior and exterior
- Shielded on all six sides
- Available lead thicknesses: .125", .25", .75", 1"
- Four casters for easy mobility
- Lockable hinged lid with handle

PTI-CLB   **Custom Lead-Lined Box**

Tri-Top Stainless Steel Waste Container with Side Door

- No Exposed Lead
- Stainless Steel Interior and Exterior
- 3" Casters on dolly for easy mobility
- Top is non-removable
- East access via side hinged door

Specifications

TTSC4
Inner Dimensions: 19"W x 13.5"D x 21"H
Shielding: .25" Lead
Weight: 213 lbs

TTSC5
Inner Dimensions: 18"W x 12.75"D x 20.5"H
Shielding: .5" Lead
Weight: 377 lbs

TTSC1
Inner Dimensions: 17"W x 12"D x 20.5"H
Shielding: 1" Lead
Weight: 667 lbs

TTSC4   Tri-Top Waste Container with Side Door, .25" Lead

TTSC5   Tri-Top Waste Container with Side Door, .5" Lead

TTSC1   Tri-Top Waste Container with Side Door, 1" Lead

Lead Lined Cabinets

All Lead Lined Cabinet options include:

- 1/4", 1/2", 3/4", 1", and 2" Lead Shielding

- Powder Coat or Stainless Steel

- Lockable Doors

- Adjustable Shelves

- Stainless Steel Marine Edge Countertop

- Backsplash

Custom cabinets are built to your exact needs and specifications.
For a quote and to discuss your needs,
give us a call to get your lead lined cabinet started!

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
- Store unit dose ammo boxes in the upper right compartment
- 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

244-111 Radioisotope Storage Cabinet 1/2" lead

244-112 Radioisotope Storage Cabinet 1" 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

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

47

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" Diameter 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: 24.25" 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

244-131   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

Generator 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

- 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:	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" Diameter 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

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:	Halogen lamp with two 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

Lead-Lined Phantom Cabinet
Great For Storing
Fillable or Co-57 Sheet Sources

- Stainless Steel

- Lockable front hinged door

Specifications:
OD: 12 3/8" W x 26 5/8" D x 36" H
ID: 9 3/4" W x 23 1/2" D x 28 7/8" H
Weight: 411 lbs

PC-SS   Lead-Lined Phantom Cabinet, 1/4" Lead

Stainless Steel or Powder Coat
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
Finish: Stainless Steel or Powder Coat
Lead Shielding: 1/4"
Door: Key-locked
Weight: 900 lbs

Can also be customized to your specifications!

234-204   Stainless Steel Decay Cabinet, 1/4" Lead

I-131 Fume Hood

*Front door hinges are placed forward
for easy opening for cleaning*

- 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
- Fan motor is 120 VAC, 60 Hz
- Two 12" x 12" x 1" disposable charcoal filters included
- Draws 115 CFM

Specifications:
Dimensions: O.D.: 24" W x 20" D x 36" H
Weight: 110 lb

I-131FH   Fume Hood
FHCF-100   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" (3.6 mm lead equivalency)

You are responsible to hook the fume hood to your exhaust

Are you looking for a standard or custom cabinet?
Contact Pinestar with your specifications

- Lead thickness to meet your needs
- Available in stainless steel or powder coat finish
- Drawers and door swing to fit your work environment
- Customized placement of your dose calibrator chamber, well counter chamber and sharps container

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

Lead-Lined Modular Cabinet

- 4" Backsplash with 1/2" spill proof lip
- Drop port with shielded cover
- Two adjustable shelves hold up to 100 lb
- 3" Removable kickplate on all sides
- 304 Stainless steel hinges and shelf rails
- Continuous Countertop

Cabinet Specifications:

Outside Dimensions:	62.5" W x 30" D x 36" H (height does not include backsplash)
Lead Shielding:	1/2" thick on all 6 sides
Doors:	Three (key-locked chrome)
Left and Center Cabinets Adjustable Shelves:	15 1/4" W x 28 1/4" D
Finish:	Stainless steel
Weight:	3000 lb

Drop Port Specifications:

Drop Port Opening: 3" Diameter

Drop Port

MC-6050   Lead-lined Modular Cabinet

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

Lead-Lined Cabinet For Nuclear Medicine
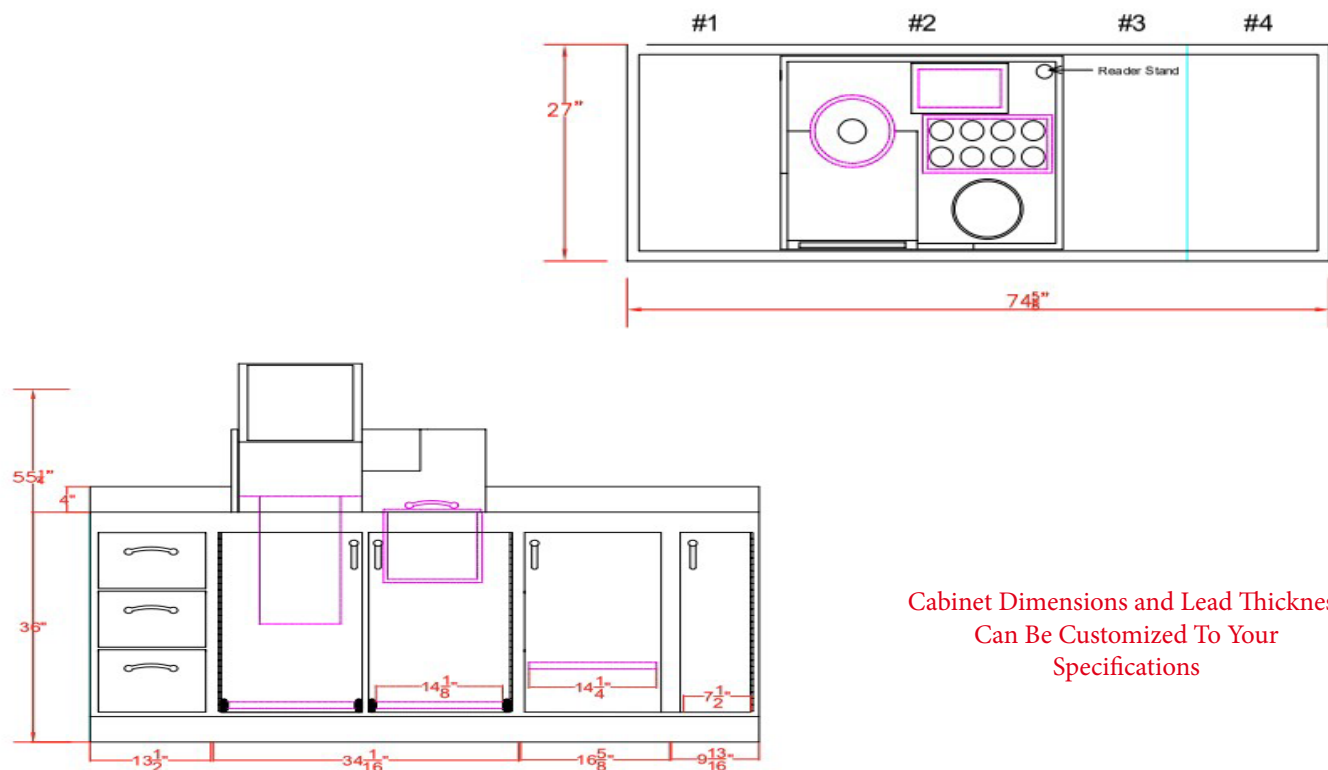
Cabinet Dimensions and Lead Thickness Can Be Customized To Your Specifications

- Stainless Steel Indside & Outside
- 1/4" lead lining on front, back, top, sides, doors and drawers
- Non-spill lip (marine edge on top surface with 4" backsplash)
- L-Block with 1/2" lead lining in front with 12" x 12" lead glass (3.6mm lead equivalent)
- Cave with 1/2" lead lining with arm slots

Three Drawer Compartment:	Drawer inside dimensions: 10.5" W x 24" D x 7.5" H
Left side Compartment:	15.5" W x 25" D x 26 3/4" H 1/4" Lead inside and slide out tray 1/2" Lead Lined Dose Calibrator chamber box
Second Compartment from left:	15 3/4" W x 25" D x 26 3/4" H 1/2" lead-lined Wipe Test Counter Chamber shield 1/4" lead-lined Sharps Container shield Pig Holder
Third Compartment from left:	Single Door with 1 Adjustable Shelf 100 Lbs Capacity
Right Compartment:	Single Door for Flood Sources

MC-6051   Lead-lined Modular Cabinet

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

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)
- Stainless steel inside and outside

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**

Lead-Lined Refrigerator

Specifications:
Dimensions:	24.18" 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/ 60 Hz, 1.1 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

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

PET Cabinet

Page 75

PET Cabinet

Page 77

Nuclear Medicine Cabinet
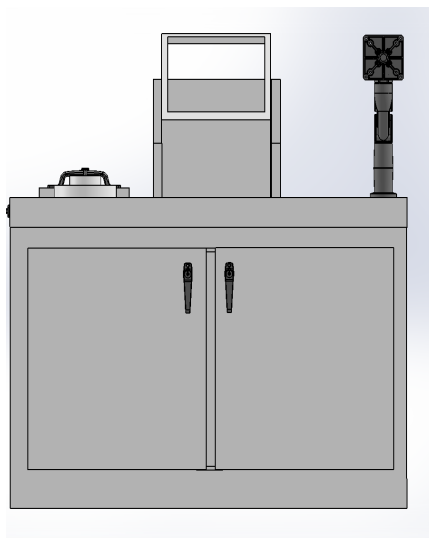
Page 12

PET Table

Page 75

Four Drawer Storage Cabinet

- Four Drawer Radioisotope Storage Cabinet

- 1/4" Lead, 1/2" Lead, or 1" Lead

- Stainless Steel Inside & Outside

- Exterior Dimensions: 12" W x 36" H x 22" D

- Custom Configurations are Available

PTI-SC14	Four Drawer Storage Cabinet, 1/4" Lead, 300 Lbs
PTI-SC12	Four Drawer Storage Cabinet, 1/2" Lead, 525 Lbs
PTI-SC1	Four Drawer Storage Cabinet, 1" Lead, 975 Lbs

Lead-Lined Storage Safe

- Stainless steel 2" lead-lined safe
- Key locked door
- This unit can be moved with a pallet jack
- Adjustable heavy duty shelf

Specifications:
Outer Dimensions:	17 1/2" W x 17 1/2" D x 22" H
Inner Dimensions:	13.5" W x 14" D x 14.5" H
Shielding:	2" lead on all 6 sides
Door latch:	Key-locked
Weight:	1,435 lbs

PTI-006   Lead-Lined Storage Safe, 2" lead
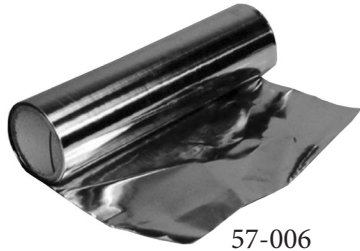
Lead Foil

- 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
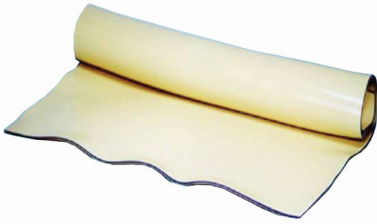
Lead Vinyl Sheets

- 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 1/16" thick, Weight: 9 lb
57-902	Lead Vinyl Sheet, .5 mm lead equiv 24" W x 4' L x 1/10" thick, Weight: 12 lb
57-904	Lead Vinyl Sheet, 1 mm lead equiv 24" W x 3' L x 3/16" thick, Weight: 18 lb

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

Enamel Painted Colored Lead Bricks

- Available in two sizes:
  - 2" x 4" x 6"
  - 2" x 4" x 8"

- Available Colors: Painted Stainless Steel - Grey - Off-White - Black

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
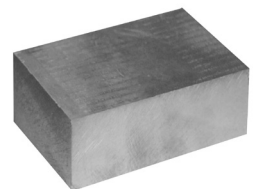
Mobile Radiation Shield

- Protect your staff from unnecessary exposure
- Easily maneuvered and locked in place with
  (2) Lockable and (2) Non-locking - swivel casters
- Easy to clean stainless steel finish

Specifications:
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
Casters: (2) Lockable, (2) Non-Locking- Swivel

PTI-2460   Mobile Radiation Shield

Mobile Barrier

- Another great shielding option
- Available in 1/8", 1/4", 1/2" and 1" lead thicknesses

Specifications:
Height: 72"
Width: 36"
Total Depth: 40"
Window: 8" W x 10" H
              2 mm lead equivalency
              Polycarbonate on both sides of glass
Casters: (2) Lockable, (2) Non-Locking- Swivel

NMC-7236-18 Mobile Barrier, 1/8, 165 lbs
NMC-7236-14 Mobile Barrier, 1/4, 295 lbs
NMC-7236-12 Mobile Barrier, 1/2", 564 lbs
NMC-7236-01 Mobile Barrier, 1", 1115 lbs

Mobile Lead Barrier

- Mobile Lead Barrier provides personnel protecion against scatter radiation and its four stainless steel casters make it easy to maneuver between the cath lab & operating room
- Mobile Lead Barrier offers 2.0 mm lead equivalent glass & opaque panels

56-25391   Mobile Lead Barrier with 24"x30" Window
Dimensions: 75"H x 30"W, Lead Opaque Panel: 48"H x 30"W

56-25395   Mobile Lead Barrier with 48"x 30" Window
Dimensions: 75"H x 33.5"W, Lead Opaque Panel: 23"H x 30"W

Compact Adjustable Radiation Shield

- Shield can be used to protect technologists from sitting or lying "hot" patients
- Fold down shelf can be used to hold syringe shields, carriers and injectors
- Wheel and swivel locks on each caster

Specifications:
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"
Shielding: 1" lead
Finish: Powder coat
Weight: 230 lb
Shipping Weight: 366 lb

042-522   Compact Adjustable Radiation Shield

Adjustable Height Mobile Radiation Shield

- Easy to place where shielding is needed
- Wheel and swivel locks on each caster provide secure placement
- Adjustable height

Specifications:

Dimensions:	37.75" W x 29" D x 40.5" H
Shield:	36" W x 19" H
Height Adjustable:	36" to 40.5"
Shielding:	1" Lead
Finish:	Powder coat
Weight:	446 lb
Shipping Weight:	560 lb

042-519   Adjustable Height Mobile Radiation Shield

Soft Adjustable Mobile Shield

- Designed to protect against scatter radiation
- Constructed of easy to maintain lead vinyl
- Durable chrome finish frame
- Easy to roll on 4 casters

Specifications:

Dimensions:	24" W x 33"- 48" H x 18" D
Shielding:	Lead vinyl (.5 mm lead equivalency)
Weight:	30 lb

042-111   Soft Adjustable Mobile Shield

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

Specifications:

Dimensions:	17 1/2"W x 56"H x 27 1/2"D
Weight:	700 lb

NMC-PMRS   PET Mobile Radiation Shield

MRI Compatible Syringe Shield for PET

9 mm Tungsten MRI Compatible Syringe Shield for PET with Nylon Screw

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

PET/MRI Syringe Shield

- MR Conditional for 3T
- Constructed of 9 mm tungsten
- 5.6 high density flush mounted lead glass window

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

Large MRI Phantom™
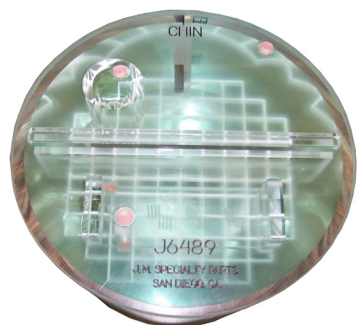
- The ACR-MRI phantom is an 8" (203.2mm) diameter cylinder, 6.82" (173.40mm) tall with various fixtures inside including a dinosaur, grid, membrane stack, ramp, resolution block and S-N chamber
- The measured volume of one, version 2 phantom is 3627 ml (+/- 10 ml, maybe more, but likely less)
- The salt solution inside the phantom contains <11 grams nickel chloride hexahydrate and 17 grams of sodium chloride in 3.8 liters of water
- Inside the resolution block is hydrogenated vegetable oil
- This unit may break open if subjected to extremes of temperature.   Keep temperature between 60-80°F (15-27°C)

MRI phantoms contain none of the following:
Lead (Pb)   Mercury (Hg)
Cadmium (Cd)   Hexavalent Chromium (Cr VI)
Polybrominated Biphenyls (PBB)
Polybrominated Diphenyl Ethers (PBDE)
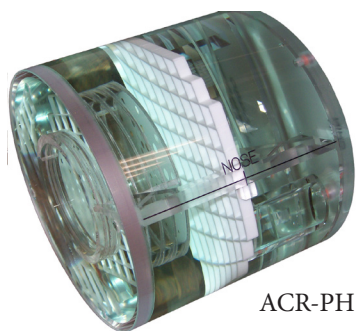
ACR-PH1	Large MRI Phantom

ACR Medium MRI Phantom

The ACR-PHM MRI phantom is a 7" (177.8mm) diameter cylinder, 6.125" (155.575mm) cylinder length, with various fixtures inside including a dinosaur, drilled plate, membrane stack, ramp, resolution block, and S-N chamber.
The level bar is 6.375" (161.93mm) length, .375" (9.53mm) width, .375" (9.53mm) height.
Inside the resolution block is ~1 ml hydrogenated vegetable oil. (brand name – Crisco)
The plate has nine holes, each hole is 1.5mm. Holes are spaced 45mm center to center.
The measured volume of one medium phantom is 2.7 liters.
The volumes could be +/- 10 ml, maybe more, but likely less.
The salt solution inside the phantom contains <8 grams nickel chloride hexahydrate and 12 grams of sodium chloride in 2.7 liters of water.

ACR-PHM	ACR Medium MRI Phantom

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

Class 5 Dose Dispensing Hoods

- The Class 5 Dose Dispensing Hood is designed to economically assist nuclear medicine departments with compliance of USP 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 (PTI-016) and the Beta Gamma Table Top L-Block (BG-TS).
- (Note: L-Block shields are not included)

CLASS5-MT   CLASS5-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.

Class 5 Hood for the Mini Table Top L-Block

CLASS5-MT	Class 5 Dose Dispensing Hood for Mini L-Block
	13.75" W x 19.25" D x 23.25" H, Weight: 33 lb
PTI-016	Mini Shield, 1/2" lead, 3.66 mm lead equiv. glas

Class 5 Hood for Beta Gamma Table Top L-Block

CLASS5-BG	Class 5 Dose Dispensing Hood for Beta Gamma L-Block
	15.5" W x 24" D x 28" H, Weight: 37 lb
BG-TS	Standard Beta/Gamma Shield, 1/2" lead

C5-AW66	6" x 6" Sterile 70% Alcohol Wipes, 100/case
C5-HP	Replacement Class 5 HEPA Filter

Note: Table Top L-Block Shields are not included, please refer to page 26-27

Specifications are subject to change without notice

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

Class 5 Dose Dispensing Hood with Lead and Built-in L-Block
2 Sizes Available - Mini or Standard

CLASS5-LB-MT and CLASS5-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
CLASS5-LB-MT Dimensions:

Glass:	8" x 10" viewing area with 3.6mm lead glass
Dimensions:	24.75" H x 14" W x 21.75" D
Weight:	100 lb

Standard
CLASS5-LB-BG Dimensions:

Glass:	12" x 12" viewing area with 3.6mm lead glass
Dimensions:	32.25" H x 15.5" W x 28" D
Weight:	150 lb

CLASS5-LB-MT   Mini Class 5 Dose Dispensing

Hood w/ Built-in L-Block

CLASS5-LB-BG   Standard Class 5 Dose Dispensing

Hood w/ Built-in L-Block

Class 5 Dose Dispensing Hood with Built-in L-Block
For PET
See Next Page

PET - Class 5 Dose Dispensing Hood
Features a 1 1/2" Lead-Lined L-Block

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

CLASS5-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 Class 5 Dose Dispensing Hood into One Convenient Unit

---

CLASS5-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

CLASS5-LB-MT-PET PET Class 5 Dose Dispensing Hood w/ Built-in L-Block

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
- Easy-access dispenser box of 200 pairs

240-382 Ear Plugs, 200 pairs/box

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 17.75" 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: 1/2" plastic
            1/8" lead on all 6 sides

**Inside View
1/2" plastic shielding**

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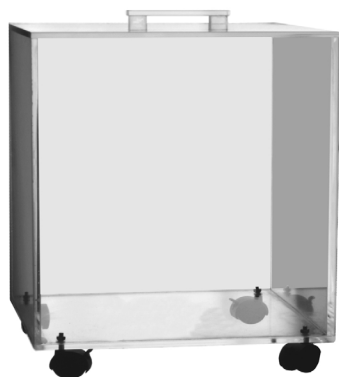
Beta Box / Waste Container

- Designed for Beta isotopes
- Suitable for Ra-223 and Zevalin Y-90
- Hinged lid with handle
- 4 casters

Specifications:
Dimensions: 16" W x 16" D x 29" H
Shielding: 12 mm clear acrylic

RIP-BB   Beta Box /Waste Container

ClearView Pluvicto (Lu-177) Administration and Transport Shield

- 0.25" Acrylic
- Lu-177: 96% Shielding
- 0.3" Lead Equivalency
- Exposure with Shield: 0.78mR/min
- Syringe Shield Dimensions: 3.5" OD x 0.9" ID x 3.75" L
- Cradle Dimensions: 5.5"H x 4.75"W x 5"L
- Total Weight 4.4 Lbs

R100186   Lu-177 Administration Shield Complete Assembly
R100187   ClearView 20cc Beta Gamma Syringe Shield 0.3" Lead Eq
R100188   Front Shield for Part Number R100187
R100189   Cradle for Part Number R100187

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Beta/Gamma Container Shield

- Designed for Beta/Gamma waste
  1/4" lead
  1/2" plastic liner
- Stainless steel exterior
- Hinged lid

Dimensions:
Exterior:	11" W x 15" H x 8.25" D
Interior:	8.88" W x 9.75" H x 5" D
Weight:	79 lb

610-1PH-BG   Beta/Gamma Container Shield

610R-8   Red Plastic Container, Quantity 8
610R-16   Red Plastic Container, Quantity 16
610R-32   Red Plastic Container, Quantity 32

Y-90 Vial Shield

- Accommodates all standard 10 ml evacuated vials including Zevalin

Dimensions:
Height (including lid):	3.3"
Inner Diameter:	0.93"
Shielding:	0.43" Lexan
Weight:	< 1 lb

Y90-VS   Y-90 Vial Shield

Y-90 or In-111 Unit Dose Pigs

- Accommodates a 10 ml B-D syringe filled to 9 ml with or without needle
- The lead and acrylic are encased in a durable Lexan

Dimensions:	10.3" L x 2.3" Diameter
Lead Shielding:	0.09"
Acrylic Shielding:	0.36"
Weight:	3 lb

- Accommodates a 10 ml B-D syringe filled to 10 ml with or without needle
- The lead is encased in a durable Lexan

Dimensions:	10.3" L x 2.3" Diameter
Lead Shielding:	0.5"
Weight:	8.2 lb

001-788   Unit Dose Pig, Zevalin Y-90-Red
001-789   Unit dose Pig, Zevalin In-111-Blue

Beta / Gamma Syringe Carrier

- 1/8" Lead & 1/2" Polyethylene Shielding
- Stainless Steel Exterior
- Single Front latch
- Exterior Dimensions: 14" L x 6.5" W x 8.25" H (Including Handle)

BGSC-60   Beta / Gamma Syringe Carrier

ClearView Beta Gamma Syringe Shield

CVBG-3	Syringe Shield, 2mm Lead eq 3cc
CVBG-12	Syringe Shield, 4mm Lead eq 12cc
CVBG-1010	Syringe Shield, 4mm Lead eq 10 cc
CVBG-1020	Syringe Shield, 4mm Lead eq 20 cc
CVBG-1030	Syringe Shield, 4mm Lead eq 30cc

CVBG-1-Cu-67 Syringe Shield, 4mm Lead eq 1cc
CVBG-3-Cu-64 Syringe Shield, .25" Lead eq 3cc
CVBG-5-Cu-64 Syringe Shield, .25" Lead eq 5cc

CVBG-5-2MM   Syringe Shield, 2mm Lead eq 5cc

CVBG-5060Cu Syringe Shield, .25" Lead eq 50/60cc
CVBG-5060Lu Syringe Shield, 4mm Lead eq 50/60cc
CVBG-SCREW Replacement Screw for ClearView Syringe Shields

Tungsten Beta/Gamma Syringe Shields

- Tungsten & Plastic
- Lead Glass Viewing Window

BG-10CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 10cc for BD Syringes
BG-12CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 12cc for Monoject Syringes
BG-20CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 20cc for BD Syringes
BG-30CC	Tungsten Beta/Gamma Syringe Shield with Lead Glass, 30cc for BD Syringes
LG1020	Lead Glass Replacement for 10 & 20 cc Syringe Shields

BETA Syringe Shield

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

- Lead and plastic shielding, designed for Beta
- Barrell is constructed of clear plastic and 0.62" thick lead
- Clear plastic window
- Suitable for Alpha emitting therapy agents

007-956	Beta Syringe Shield, 1 cc
007-957	Beta Syringe Shield, 10 cc
007-958	Beta Syringe Shield, 20 cc

PET Syringe Shields for HSW/Norm Ject Syringes

- Available with or withough Lead glass window
- 9mm tungsten

3HSW	3cc Syringe Shield for HSW/Norm Ject Syringes, No Lead Glass
5HSW	5cc Syringe Shield for HSW/Norm Ject Syringes, No Lead Glass

3HSW-G	3cc Syringe Shield with Lead Glass for HSW/Norm Ject Syringes
5HSW-G	5cc Syringe Shield with Lead Glass for HSW/Norm Ject Syringes
12HSW-G	12cc Syringe Shield with Lead GLass for HSW/Norm Ject Syringes

Labconco Logic®+ Biological Safety Cabinets
Class II, Type A2 Recirculating Exhaust Hood

Labconco Logic®+ Class II, Type A2 Biosafety Cabinets (BSCs) provide maximum safety for technicians preparing compounded sterile products. Logic+ Type A2 models include a line-of-sight display and superior ergonomic features that improve safety and comfort while working. When customized with precision lead shielding, Logic+ BSCs provide a safer place to prepare radiopharmaceuticals.

- Supply and Exhaust HEPA filters (99.99+% @ 0.3 um) maintain ISO 5, or better, air
- Superior Ergonomics: 10° angled sash, curved armrest, line-of-sight display screen
- MyLogic OS simplifies BSC operation
- Intelligent ECM Blower with CAP™ technology maintains precise airflow with long filter life
- Optional accessory package: UV Light, Cable Passthrough, and right-side service fixture

Logic+ Class II Biosafety Cabinets - Standard Features (All Models)
- Compliant with USP <797> and USP <825>
- Supply and Exhaust HEPA Filters (99.99+% @ 0.3 um)
- Recirculating Airflow
- ISO 5 laminar airflow within BSC
- Unitized Type 304 stainless steel construction
- Intrinsically safe negative pressure design
- Removable, crevice-free worksurface design
- Interior Line-of-Sight Display with MyLogic™ OS
- LED Lighting
- 10" Sash opening
- 3', 4', 5', & 6' Widths
- 115V, 60Hz (3'-4' 15A, 5'-6' 20A)
- Permanent Adjustable Stand (26"- 36")

Options for Class II Biosafety Cabinets
- Lead shielding (1/4", 1/2", 1" or 2")
  - Sides, Bottom and Back
  - Dose calibrator chamber
  - Sharps container
- Dose Calibrator Chamber flushed to work surface
- Sharps Container flushed to work surface
- Mounted Readout Unit (Inside or Outside)
- Sliding L-Block for Nuclear Medicine, Stationary L-Block for PET

① Lead Shielding on Sides, Back, and Bottom

② Dose Calibrator Readout Unit

③ Sharps Container Flushed to Countertop

④ Sliding or Stationary L-Block

⑤ Dose Calibrator Chamber Shield Flushed to Countertop


Note: 3' Model pictured with lead shielding, dose calibrator readout unit, flush-mount sharps container, dose calibrator chamber, and sliding L-block

Nuclear Medicine:
Sliding L-Block   1/2" or 1" Lead in Front
                          12" x 16" 3.6mm lead equiv glass

PET: 2" Lead in Front
Stationary L-Block   8" x 8" x 4" OR 12" x 16" x 2" Lead Glass

Type A2 Dimensions	3'	4'	5'	6'
Internal (W x D* x H)	36.5" x 17.6" x 25.7"	48.5" x 17.6" x 25.7"	60.5" x 17.6" x 25.7"	72.5" x 17.6" x 25.7"
External (W x D x H)	42.3" x 32.0" x 61.8"	54.3" x 32.0" x 61.8"	66.3" x 32.0" x 61.8"	78.3" x 32.0" x 61.8"

*17.6" Indicates working depth of BSC. Total depth of BSC interior is 25.6" Note: Dimensions will vary with width and lead shielding
See page 68 for Logic+ A2 drawings

Labconco Logic®+ Biological Safety Cabinets
Class II, Type B2 Total Exhaust Hood

Labconco Logic®+ Class II, Type B2 Biosafety Cabinets (BSCs) provide maximum safety for technicians when prepar-
ing compounded sterile products. Logic+ Type B2 models are 100% externally vented, and include a line-of-sight
display and superior ergonomic features that improve safety and comfort while working.
When customized with precision lead shielding, Logic+ BSCs provide a safer place to prepare radiopharmaceuticals.

- 100% Total Exhaust design for applications involving volatile chemicals, such as I-131 or Xenon
- Supply and Exhaust HEPA filters (99.99+% @ 0.3 um) maintain ISO 5, or better, air
- Superior Ergonomics: 10° angled sash, curved armrest, line-of-sight display screen
- MyLogic OS simplifies BSC operation
- Intelligent ECM Blower with CAP™ technology maintains precise airflow with long filter life
- Optional accessory package: UV Light, Cable Passthrough, and right-side service fixture

Logic+ Class II, Typle B2 Biosafety Cabinets - Standard Features (All Models)
- Compliant with USP <797> and USP <825>
- Supply and Exhaust HEPA Filters (99.99+% @ 0.3 um)
- 100% Exhausted design: 10" round duct collar
- ISO 5 laminar airflow within BSC
- Unitized Type 304 stainless steel construction
- Intrinsically safe negative pressure design
- Removable, crevice-free worksurface design
- Interior Line-of-Sight Display with MyLogic™ OS
- LED Lighting
- 8" sash opening
- 4' and 6' Widths
- 115V, 60Hz (15A)
- Permanent Adjustable Stand (26"- 36")

① Lead Shielding on Sides, Back, and Bottom

② Dose Calibrator Readout Unit

③ Sharps Container Flushed to Countertop

④ Sliding or Stationary L-Block

⑤ Dose Calibrator Chamber Shield Flushed to Countertop

Options for Class II Biosafety Cabinets
- Lead shielding (1/4", 1/2", 1" or 2")
  - Sides, Bottom and Back
  - Dose calibrator chamber
  - Sharps container
- Dose Calibrator Chamber flushed to work surface
- Sharps Container flushed to work surface
- Adjustable mounted Readout Unit (Inside or Outside)
- Sliding L-Block for Nuclear Medicine, Stationary L-Block for PET

Note: 4' Model pictured with lead shielding, dose calibrator readout unit, flush-mount sharps container, dose calibrator chamber, and sliding L-block

| Nuclear Medicine | 1/2" or 1" Lead in Front |
| *Sliding L-Block* | 12" x 16" 3.6mm lead equiv glass |

| PET: | 2" Lead in Front |
| *Stationary L-Block* | 8" x 8" x 4" OR 12" x 16" x 2" Lead Glass |

Type B2 Dimensions	4'	6'	Exhaust Requirements**
Internal (W x D* x H)	48.5" x 17.6" x 25.7"	72.5" x 17.6" x 25.7"	852 CFM @ 1.8" w.g.
External (W x D x H)	54.3" x 32.0" 72.7"	78.3" x 32.0" x 72.7"	1265 CFM @ 2.2" w.g.

*17.6" Indicates working depth of BSC. Total depth of BSC interior is 25.6" **Add 2.0" for additional filter loading
Note: Dimensions will vary with width and lead shielding
See page 69 for Logic+ B2 drawings

Labconco Logic®+ Biological Safety Cabinets
Class II, Type A2 Recirculating Exhaust Hood
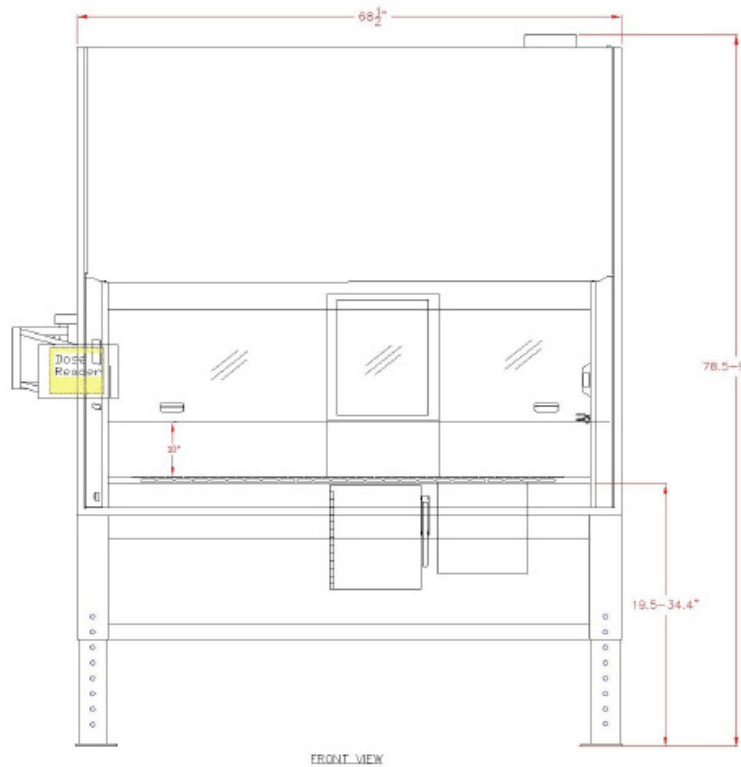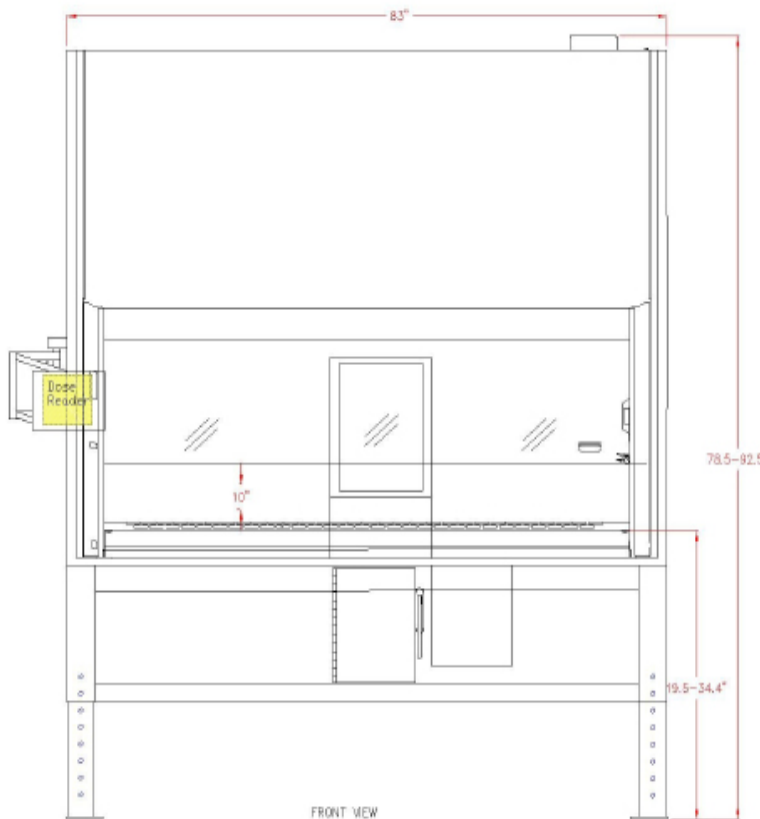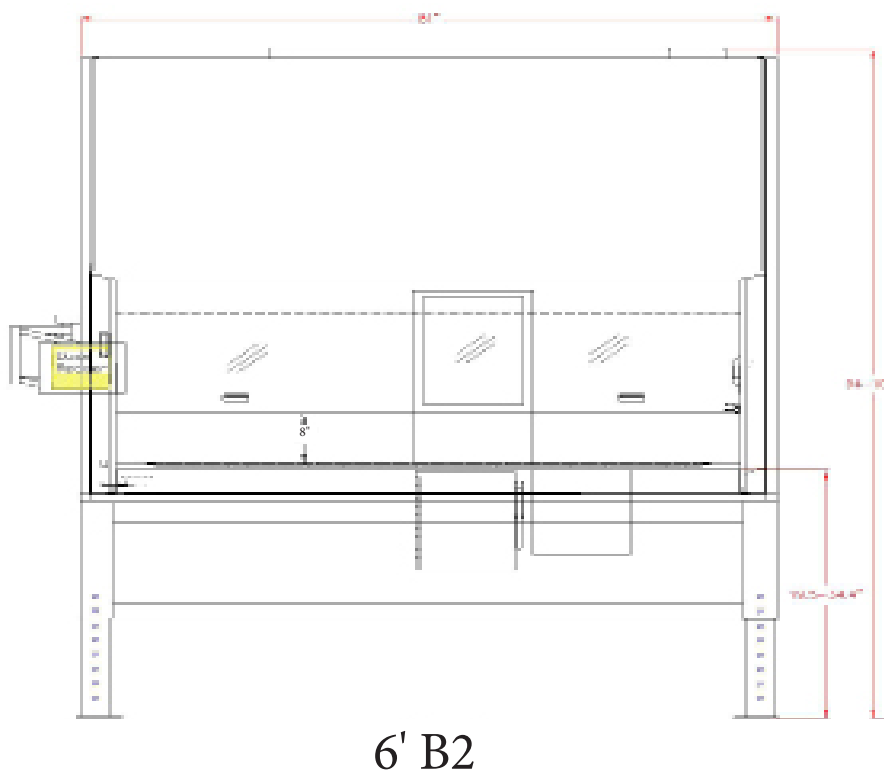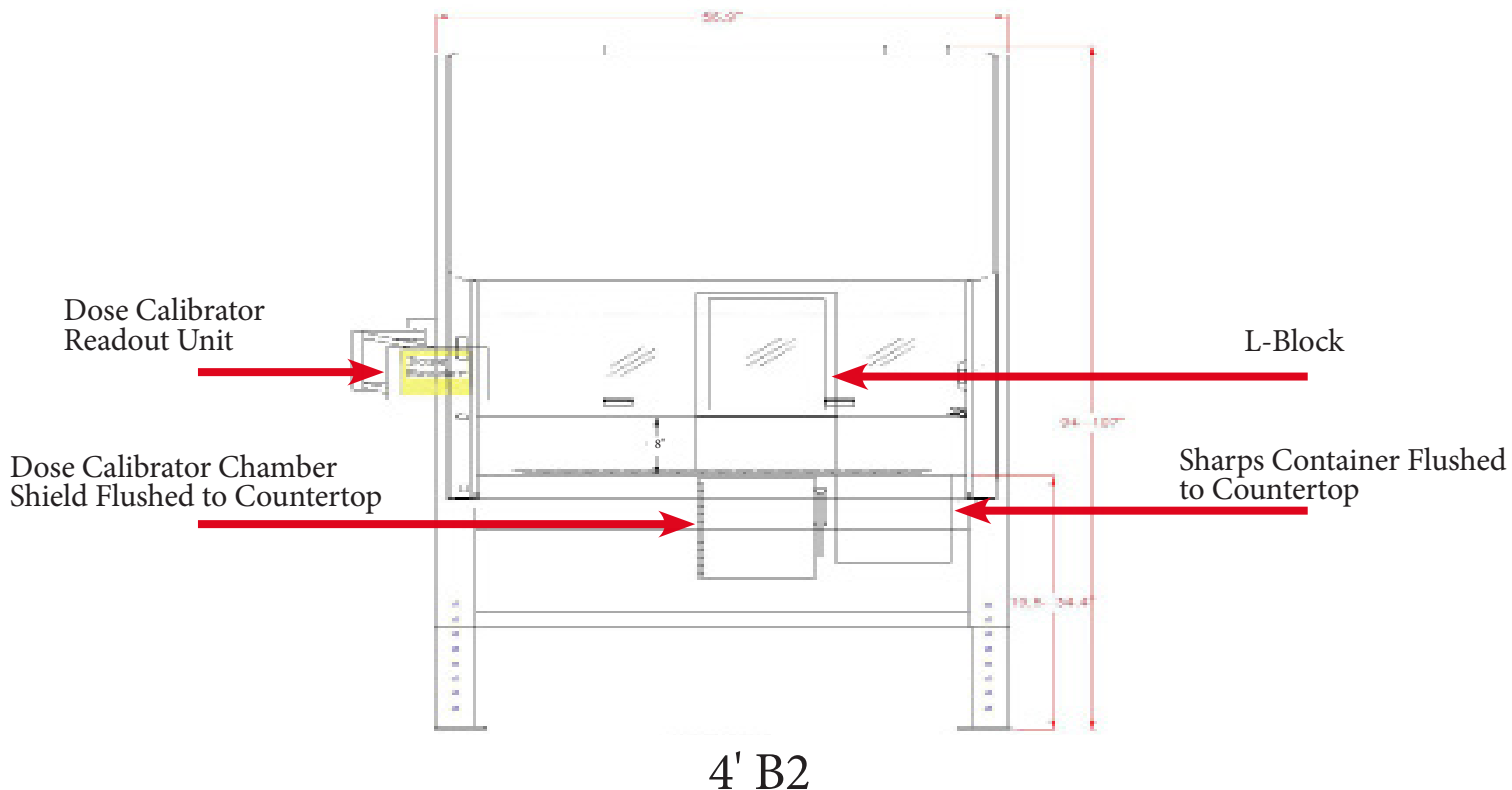*Note: Specs are subject to change*
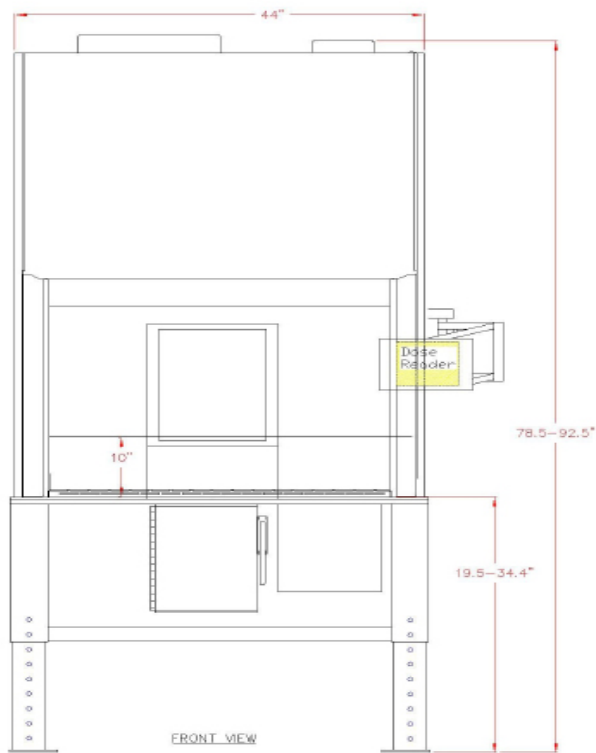
3' A2
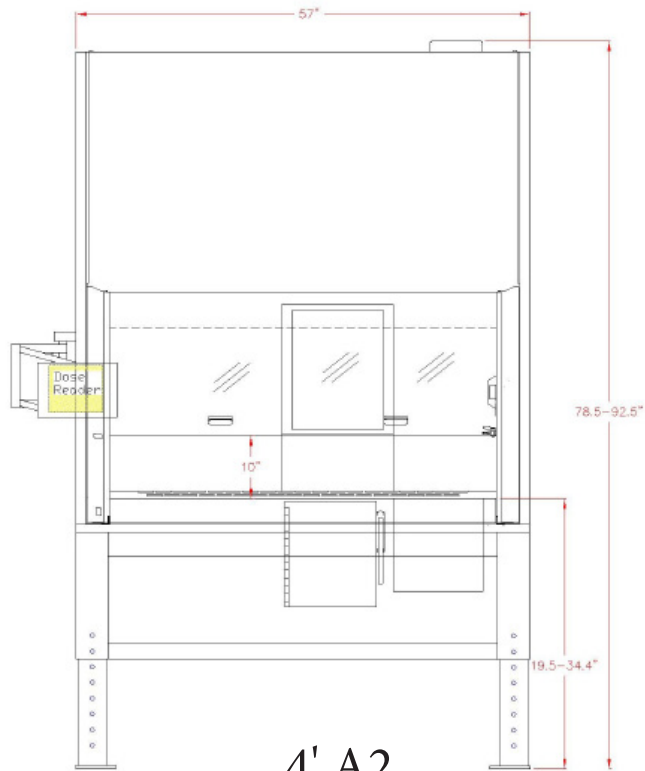
4' A2

5' A2

6' A2

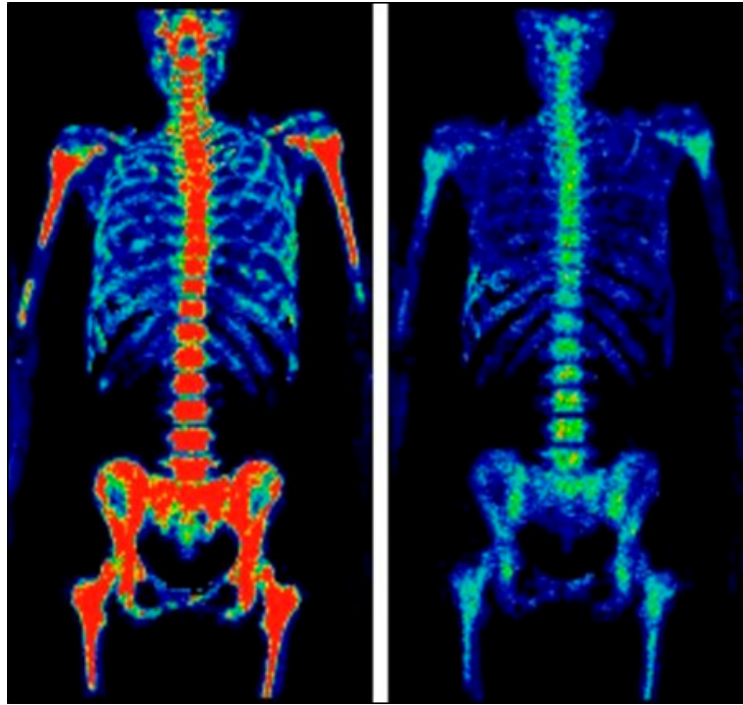# Labconco Logic®+ Biological Safety Cabinets
Class II, Type B2 Total Exhaust Hood
Note: Specs are subject to change

Dose Calibrator
Readout Unit

L-Block

Dose Calibrator Chamber
Shield Flushed to Countertop

Sharps Container Flushed
to Countertop

4' B2

6' B2

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 µCi

Contoured Leg Rest

Cardboard & Plastic Signs

Radiacwash/Bind-It

Ludlum 14 C Survey Meter

Probe

Check Source

Check Source Holder

- Designed for PET hot labs with limited space
- Accommodates:
  - Compact L-Block with Built-in Dose Calibrator Shield (042-433)
  - PET Sharps Container Shield (039-412)
  - Lead Brick Cave (042-434)
  - 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 (042-433)
  - PET Sharps Container Shield (039-412)
- 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

Accommodates lead brick cave 042-434

244-205   PET Unit Dose Cabinet, 1/4" lead

244-206   PET Unit Dose Cabinet, 1/2" lead

244-207   PET Unit Dose Cabinet, 1" lead

Does not accommodate lead brick cave

244-201   PET Unit Dose Cabinet, 1/2" Lead

244-202   PET Unit Dose Cabinet, 1" Lead

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
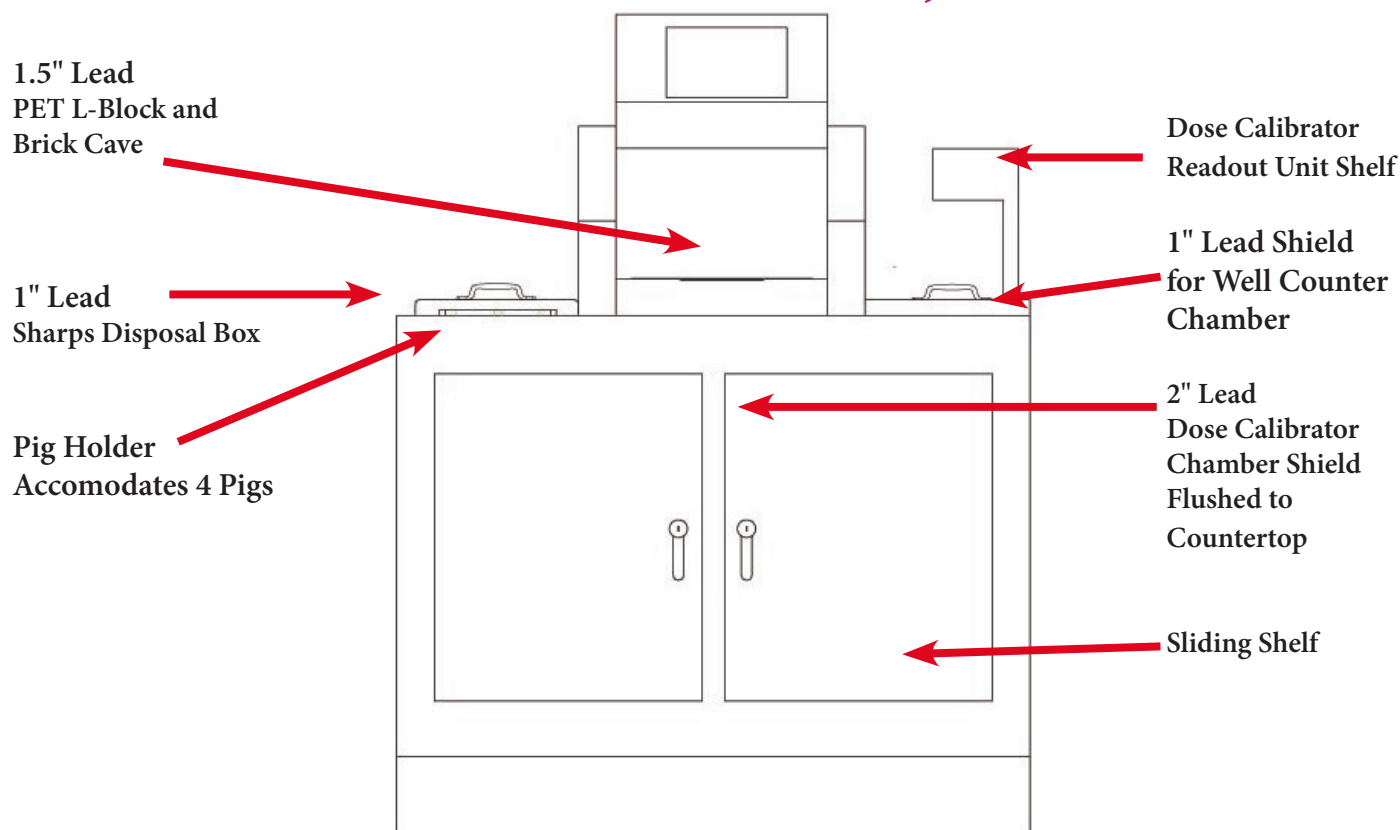
042-435   Lead Brick Cave Cover for 042-434

5730-2271 PET Sharps Container Shield, 1" lead
            Uses one NMC-416 Sharps Container

NMC-416   3.2 quart Sharps Container, 12/pkg

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/cm^3
Finish:	Powder coat	
Weight:	590 lb	

5730-2271   PET Sharps Container Shield:

Dimensions:	13.5" H x 10.6" Diameter
Lead Shielding:	Sides and Bottom: 1" thick
Security:	Key-locked
Weight:	160 lb

042-448   PET Unit Dose Table

            Includes: 042-433 Compact L-Block with Dose Calibrator Shield and 5730-2271 Sharps Container Shield

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

042-435   Lead Brick Cave Cover for 042-434

5730-2271 PET Sharps Container Shield, 1" lead
            Uses one NMC-416 Sharps Container

NMC-416   3.2 quart Sharps Container, 12/pkg

PETSSC-WCP-1
PET Stainless Steel Cabinet, 1/4" lead

1.5" Lead
PET L-Block and
Brick Cave

Dose Calibrator
Readout Unit Shelf

1" Lead Shield
for Well Counter
Chamber

1" Lead
Sharps Disposal Box

2" Lead
Dose Calibrator
Chamber Shield
Flushed to
Countertop

Pig Holder
Accomodates 4 Pigs

Sliding Shelf

Dose Calibrator Not Included

Dimensions: 45" W x 27" D x 52 1/2" H (Height is to top of L-Block.)

- Also available in 1/2" and 1" lead shielding
- Lockable front doors
- Shielded box for 610R container,   1" lead
- Shielded dose calibrator chamber, 2" lead
- Shielded well counter chamber,   1" lead
- Pig holder that accommodates 4 pigs
- PET L-Block 1.5" Lead in Front and
  1" lead base with 8" x 8" x 4" lead glass
- Overlapping Lead brick cave, 2" lead
- Weight: 3392 lbs

Top View
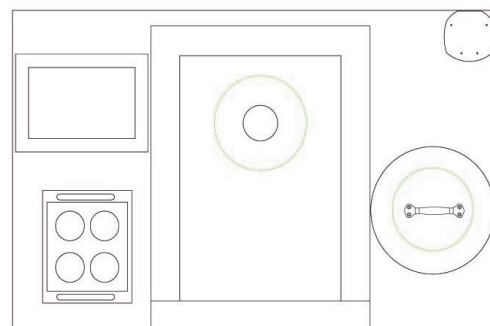
∗∗Specifications Are Subject To Change∗∗

PETSSC-WCP-1   PET Stainless Steel Cabinet, 1/4" Lead, Well Chamber

Dimensions: 8 3/8" L x 4" D x 9 1/8" H
610R-8   Red Plastic Container, Quantity 8
610R-16   Red Plastic Container, Quantity 16
610R-32   Red Plastic Container, Quantity 32

PETSSC-1
PET Stainless Steel Cabinet, 1/4" lead
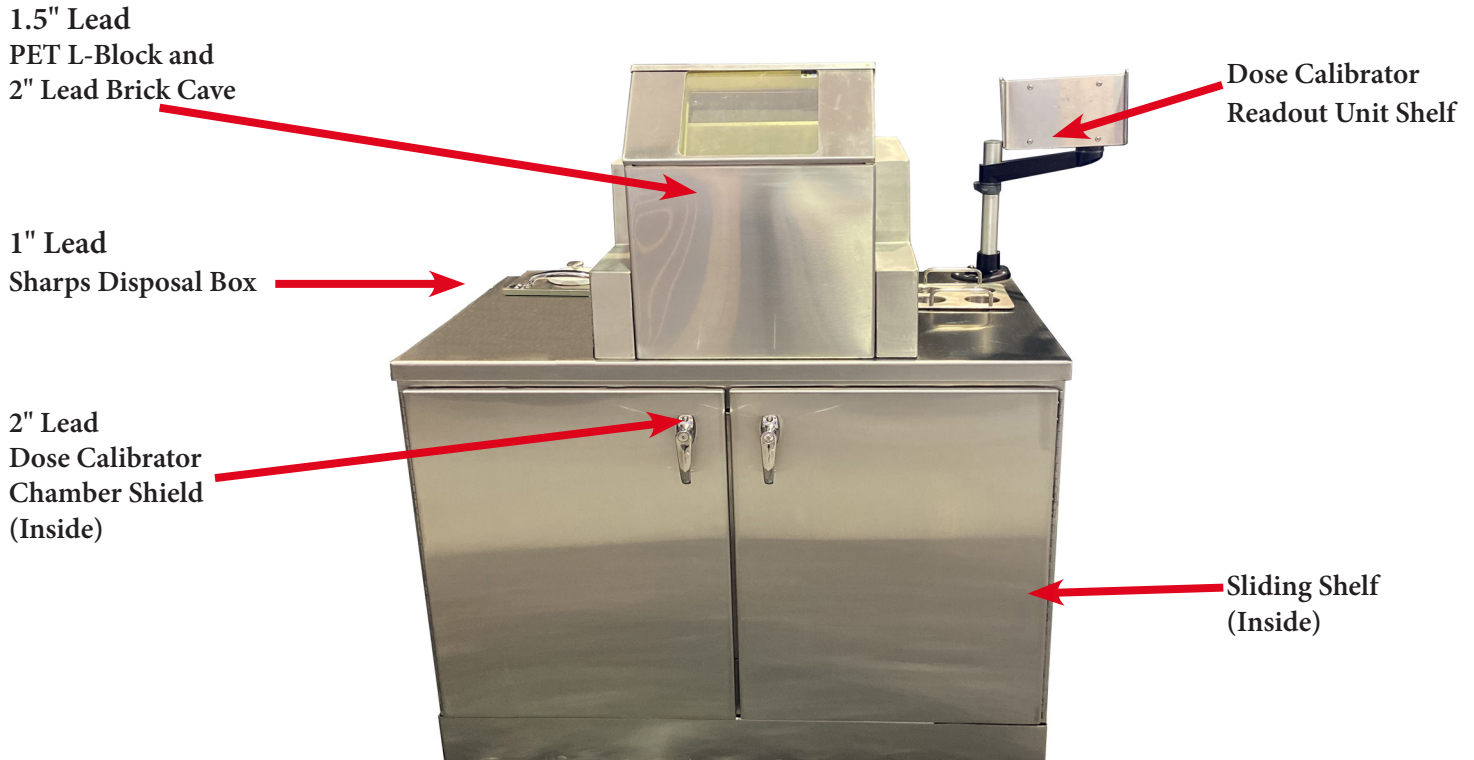
1.5" Lead
PET L-Block and
2" Lead Brick Cave

1" Lead
Sharps Disposal Box

2" Lead
Dose Calibrator
Chamber Shield
(Inside)

Dose Calibrator
Readout Unit Shelf

Sliding Shelf
(Inside)

Dose Calibrator Not Included

Dimensions: 45" W x 27" D x 52 1/2" H (Height is to top of L-Block.)

- Also available in 1/2" and 1" lead shielding
- Lockable front doors
- Shielded box for 610R container,   1" lead
- Shielded dose calibrator chamber, 2" lead
- Pig holder that accommodates 4 pigs
- PET L-Block 1.5" Lead in Front and
  1" lead base with 8" x 8" x 4" lead glass
- Overlapping Lead brick cave, 2" lead
- Weight: 3192 lbs
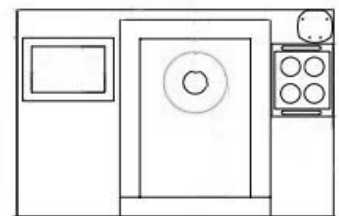
Top View

∗∗Specifications Are Subject To Change∗∗

PETSSC-1   PET Stainless Steel Cabinet, 1/4" Lead

Dimensions: 8 3/8" L x 4" D x 9 1/8" H
610R-8   Red Plastic Container, Quantity 8
610R-16   Red Plastic Container, Quantity 16
610R-32   Red Plastic Container, Quantity 32

PETSST-W1C
PET Stainless Steel Table

PET L-Block and
Brick Cave

Dose Calibrator
Readout Unit Shelf

1" Lead
Sharps Disposal Box
(Behind Well Chamber)

Pig Holder

2" Lead
Dose Calibrator
Chamber Shield

36"

2" Lead Shield for Dose
Calibrator Chamber

45"
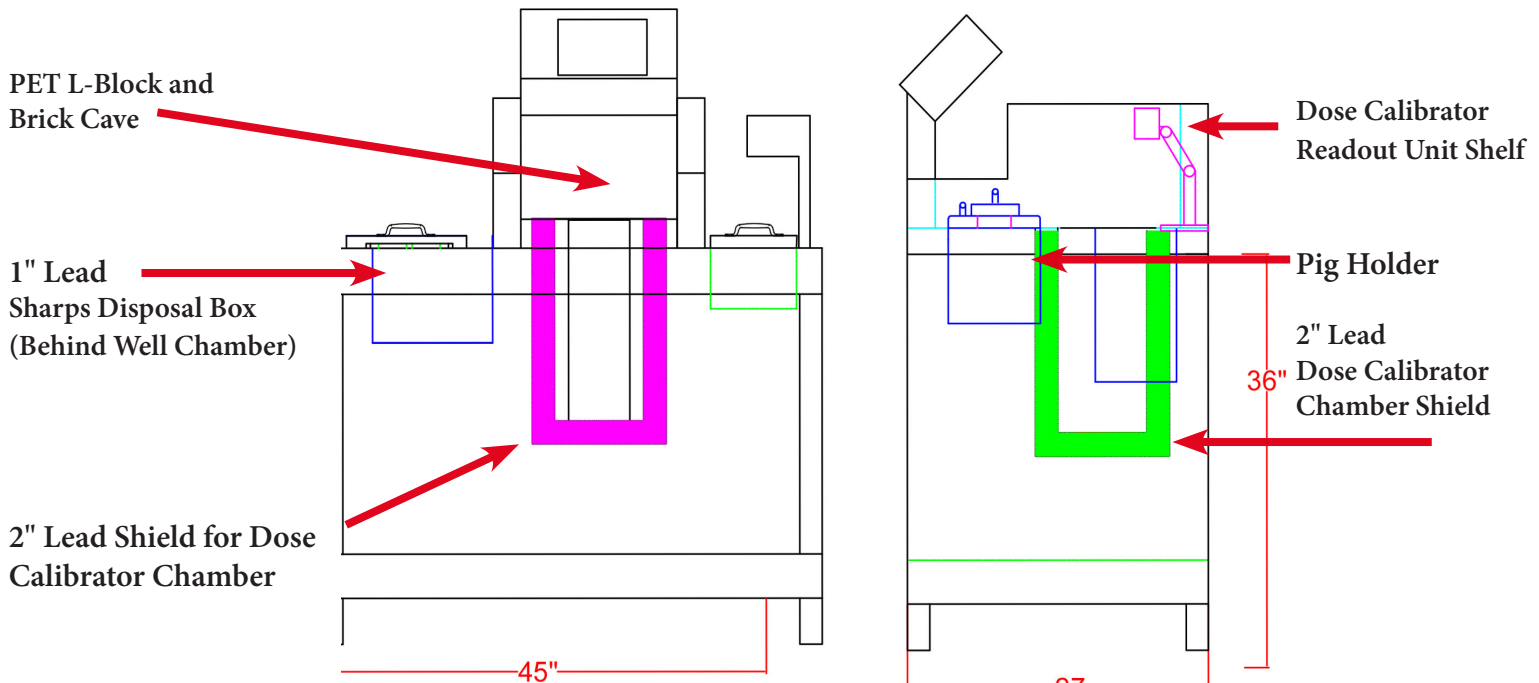
Dose Calibrator Not Included

Dimensions: 45" W x 27" D x 52 1/2" H
               (Width does not include handle. Height is to top of L-Block.)

- Shielded box for 610R container,   1" lead
- Shielded dose calibrator chamber, 2" lead
- Shielded well counter chamber,   1" lead
- Pig holder that accommodates 4 pigs
- PET L-Block 1.5" Lead in Front and
  1" lead base with 8" x 8" x 4" lead glass
- Overlapping Lead brick cave, 2" lead
- Weight 2042 lbs
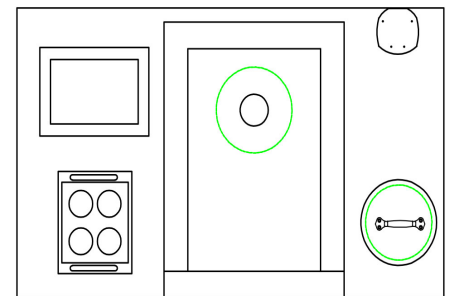
Specifications Are Subject To Change

Top View

PETSST-W1C   PET Stainless Steel Table with Well Counter Shield
PETSST-1C   PET Stainless Steel Table without Well Counter Shield

Dimensions: 8 3/8" L x 4" D x 9 1/8" H
610R-8   Red Plastic Container, Quantity 8
610R-16   Red Plastic Container, Quantity 16
610R-32   Red Plastic Container, Quantity 32

78

PET L-Block
Overlapping Lead Brick Cave

Stainless Steel covered PET L-Block

Dimensions:
L-Block with 8" x 8" x 4" lead glass: 14" W x 15" D x 20 3/4" H
Overlapping 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 460 lb
INLB-100	Overlapping Lead Brick Cave for above L-Blocks				Weight 550 lb
	with 3-Piece Stainless Steel cover, 2" Lead				

PET L-Block with Dose Calibrator Chamber Hole

- Dose Calibrator Chamber can be placed on the countertop or recessed into the cabinet
- 2" lead shielded front and base
- 8" x 8" x 4" lead glass
- 12.25" Chamber Hole on bottom
- Flanges for securing L-Block to countertop

Specifications:
Dimensions: 14" W x 20.25" H x 21.25" D, with hole for Dose Calibrator
Finish: Stainless Steel
Weight: 525 lb
Dimensions
With Cave: 19 3/8" W x 23 15/16"D x 21"T

PET-PRH

PET-PRH-12

PET-PRH   PET L-Block with Dose Calibrator Chamber Hole

Dose Calibrator Flushed to countertop

PET-PRH-12   PET L-Block with 12" Dose Calibrator Chamber Hole

Dose Calibrator Above Countertop

INLB-PETPRH   Overlapping Lead Brick Cave for PET-PRH, 2" Lead

Specifications are subject to change
Call Pinestar toll-free 1-800-682-2226, to place an order

511 Spring Armed Dose Drawing Station

- Designed for maximum radiation protection and greater flexibility when drawing doses.
- Spring arm is constructed to provide ease of positioning and effortless lifting of the 35 lb. tungsten vial.
- Easily removable inner tungsten vial shield with 1" lead equivalence shielding. Outer shield is 1" thick epoxy coated lead. In conjunction with the inner tungsten shield the user gets a combined 2" of lead shielding.
- Flanged tungsten shield is manufactured to twist and lock into the tungsten vial shield. One flanged tungsten shield is included in the purchase of the dose drawing station. (When purchasing, specify which shield size you would require, 5cc., 10cc or 20cc).
- Lead glass is protected by 1/4" plate glass laminated to the front and back viewing surface to protect lead glass from scratching and chipping.

  - Dimensions: 22.5"W x 23.875"H x 22"D
  - Lead Glass Window: 8"W x 8"H x 4"Thick
  - 2 3/8" Gapless Lead Shielding
  - Weight 250 Lbs

5510-3003	**Drawing Station with Body Shield**
5530-2074	**3 Walled Brick Enclosure for 511 L Block**
0665-2017	**511 Dose Drawing Syringe Shield, 5cc**

511 Adjustable L Block Table Top Shield

- Adjustable lead glass window from 30-55 degrees.
- Clear glass covering to protect lead glass from chipping and scratching.
- Steel construction for strength and stability.
- Adjustable window angle of 30-55 degrees with respect to vertical.

  - 2 3/8" Shielding in front wall
  - 4" Thick Lead glass window
  - Window adjustable from 30-55 degrees
  - 21"H x 15.75"W x 15.5"D
  - Weight 500 Lbs
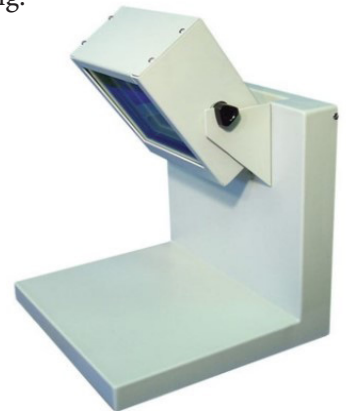
5530-2077	**511 Adjustable L Block Table Top Shield**

Lead-Lined Syringe Carriers

001-180   Syringe Carrier, Large, Weight 17 Lbs
            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 1/4" thick, Ends: 1/2" thick

DS-180   Dose Sleeve for 001-180, 4/Box

001-182   Syringe Carrier, Small, Weight 11 Lbs
            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" Z
            Lead Shielding: Sides, top, bottom 1/4" thick, Ends: 1/2" thick

DS-182   Dose Sleeve for 001-182, 4/Box

Stainless Steel Syringe Carrier

- Constructed of stainless steel inside and out, completely enclosed lead, *Not painted*
- The lead walls are poured between the stainless steel so there is no exposed lead
- Used to store and transport syringes, vials or ampoules
- The lid is overlapping with a latch to prevent streaming and opens 180°

NMC-225-14   Stainless Steel Syringe Carrier, 1/4 Lead

            I.D. 12" L x 3" W x 2" H   O.D. 14.25" L x 4.25" W x 2.75" H

            Lead Shielding: Sides, top, bottom 1/4" thick Ends: 1/2" thick

            Weight: 26.5 lb

DS-225-14   Dose Sleeve for NMC-225-14, 4/Box

PET Transporter Syringe Carrier

- Outer Dimensions: 7 7/8"H x 10 1/2"L x 4"W
- Inner Dimensions: 8 1/4"L x 3 1/16" W
- Weight: 12 Lbs
- .125" Lead on top, bottom, front and back with .5" on ends

0670-2026   PET Transporter II Lead Lined Syringe Carrier

Dose Sleeves for Syringe Carriers

- Custom fit to your syringe carrier
- Can be cleaned easily with alcohol or bleach between injections
- Easily replaced if sleeve is contaminated

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, 9mm 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
BUPET10	PET Bullet Syringe Shield, 10 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-PG1	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
- A thumbscrew holds the syringes firmly in place

Without Lead Glass Window

007-985	Syringe Shield, 3 cc without glass
007-990	Syringe Shield, 5 cc without glass
007-995	Syringe Shield, 10 cc without glass
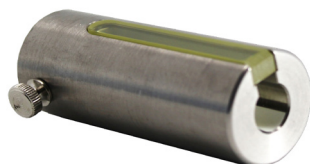
With Lead Glass Window

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 Screw

000-PET	Pro-Tec PET Replacement Screw

Replacement Glass

007-974	Pro-Tec PET Replacement Glass

Z-PET Syringe Shield

- Constructed of .55 thick (14 mm) tungsten, attenuates FDG F-18 by 97%
- Accommodates standard 3 and 5 cc syringes

PET14-3C	Syringe Shield, 3 cc
PET-14SC	Replacement Screw for PET14-3C
007-945	Syringe Shield, 5 cc
000-ZPET	Replacement Screws for 007-945

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

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

<div align="center">With Lead Glass Window</div>

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

<div align="center">Replacement Glass</div>

007-974	Gaard Lock PET Replacement Glass

<div align="center">Without Lead Glass Window</div>

007-711	Gaard Lock Syringe Shield, 3 cc without glass
007-712	Gaard Lock Syringe Shield, 5 cc without glass
007-713	Gaard Lock Syringe Shield, 10 cc without glass

MRI Compatible Syringe Shield for PET

<div align="center" style="color:red">MRI Compatible Syringe Shield for PET with Nylon Screw</div>

<div align="center" style="color:red">9 mm Tungsten
The material has been certified as MRI-compatible</div>

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

PET 20mL Syringe Shield

- 9mm Tungsten Shielding
- Weight: 3.25 lbs
- Length: 3.5 inches
- Feet to prevent rolling

20-09T	PET 20mL Syringe Shield, 9mm Tungsten, without Glass

50 / 60 cc Syringe Shield

- 9mm Tungsten
- 4 Legs to prevent rolling
- Screw locks syringe in place
- 5.75" L x 1.875" D x 3.25" H (height to screw)
- Weight: 6.6 lb

60-09T	50/60 ml, 9mm Tungsten Syringe Shield
PET-14SC	Replacement Screw for 60-09T
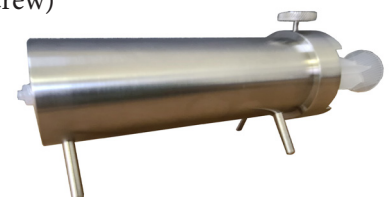
<div align="center" style="color:purple">Call Pinestar toll-free 1-800-682-2226, to place an order</div>

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
- Hinged top with handle and lock
- 3 " drop hole with lead cover

Dimensions: 10 1/2" W x 6 1/2" D x 14 7/16" H with lid
Weight: 195 lb

610-1PH   1" Lead PET Container Shield
610-1PH-FL   Lead Lined Container Shield with Flange for Mobile Unit

610R (8,16,32) Red Plastic Container,
Dimensions: 8 3/8" L x 4" D x 9 1/8" H
610R-8   Red Plastic Container, Quantity 8
610R-16   Red Plastic Container, Quantity 16
610R-32   Red Plastic Container, Quantity 32

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: 13.5" H x 10.6" OD x 6.125" ID
Lead Shielding: 1" thick
Security: Key-locked
Weight: 160 lb

5730-2271   PET Sharps Container Shield, 1" Lead
NMC-416   3.2 quart Sharps Container, 12/pkg
039-413   3.2 quart Sharps Container, 30/pkg

PET Vial Shield with Handle

Shielding: 20mm Tungsten
Container Height: 6.375" with Handle, 4.5" handle down
Outer Diameter: 2.875"
Inner Dimensions: 1" Diameter x 2" H
Weight: 18.1 Lbs

For internal transport within a facility.
It has not been approved for transport by road or air.
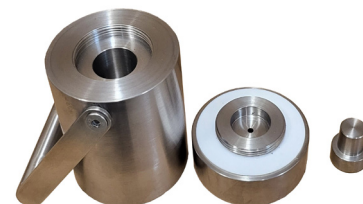
PVH   PET Vial Shield with Handle

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 3 cc or 5 cc syringes 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, 58th 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" Diameter
Lead Shielding:
Body: 1/2" thick
Ends: 1.2" thick, bottom
             1.44" thick top
Weight: 8.7 lb

Note: PET Pig Rack on page 32

001-786

001-787

001-739

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

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

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

Single System meets DOT Yellow II Type A packaging requirements when shipping up to 500 mCi (18.5 GBq) of FDG F-18

Double System meets DOT Yellow II Type A packaging requirments 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

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
001-798	PET Pig Unit Dose, 10 cc, 1/2" lead - Note - Sold in Lots of 3, No Plastic Insert
	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

PET Vial Pig

Vials containing PET or other high-energy radionuclides can be safely transported in this 10/30 ml 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

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

001-706	PET Vial Pig for 30 ml vial, 10/30 ml, 1" lead
	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 (55.5 GBq) of FDG F-18
- Meets IATA Dangerous Goods Regulations, 58th Edition Sections 5.0.4.3, 10.5, and 10.6.1 thru 10.6.3.5

001-724	PET Shipping System, Vial Pig
	Includes: 001-706 Vial Pig and Shipping Container with lead shielding
001-726	Wire Security Tags, 25/pkg
	Used to identify unauthorized access
001-771	Absorbent Sheets, 100/pkg
001-721	Document Protector, 100/pkg

PET Shipping System for Double-Ended Pig

- The PET Shipping System for Vial Pigs is designed to transport a 5 cc syringe containing high-energy radionuclides
- Designed to conserve space and minimize weight, the entire system weighs only 36 lbs
- The system meets DOT Yellow II Type A packing requirements when shipping up to 475 mCi (17.58 GBq) of FDG F-18
- Meets IATA Dangerous Goods Regulations, 60th Edition Sections 5.0.4.3, 10.5, and 10.6.1 thru 10.6.3.5

001-793	Double-Ended PET Pig
	Dimensions: 9.5"H x 2.3" Dia Weight: 9 lbs
001-794	PET Shipping System, Double-Ended Pig
	Dimensions: 11.75" L x 11.75" W x 12.5" H Weight: 36 lbs

Standard Stainless Steel Lab Cart

- Polished stainless steel construction
- Resistance-welded frame
- 3" ball-bearing swivel casters
- Counterweighted base for smoother rolling
- Mostly assembled (thread in casters only)
- Includes bolt-on push handle (adds 4" to width)

Specifications:
Dimensions: 24" W x 16" D x 30" H
                   (handle adds 4" to width)
Weight Capacity: 300 lb
Shipping Weight: 38 lb

041-311   Standard Stainless Steel Lab Cart

PPG-PET   Pig Transport Cart

- Constructed of stainless steel inside and outside
- No exposed lead
- Ideal for transporting a dose in a syringe shield
- Locking casters for easy maneuverability and secure placement
- Heavy duty lockable shocks on both side of the lid help to raise and lower the lid and will hold it in place

Specifications:
External Dimensions: 18 3/8"W x 24"D x 44"H
Box Inside Dimensions: 11"L x 3"W x 1 5/8"H
Drawer Dimensions: 13 1/8"W x 8 1/4" D x 10 3/4"H
Shielding:
Rectangular Box Cover: 1.5" lead
Weight: 316 lbs

PPG   PET Pig Transport Cart, Rectangular Box 1.5" Lead

Contoured Leg Rests
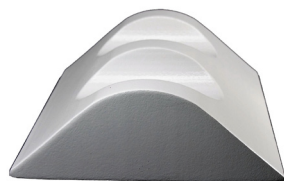
- 3 heights allow for positioning of patients of various heights
- Created to prevent the cycle of low back stress and pain that commonly occur during supine imaging and treatment
- Unique recesses create additional lateral support, thereby minimizing both rotational and translational body motion
- Ideal 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*

NMC-71718

Care-Cleaning: Spray & wipe clean with any water based medical grade germicidal

Contour Leg Rest 7"
NMC-807

Comfort Leg Rest
CLR-807

Tapered Leg Rest
TAP-807

Be prepared for all your patient positioning needs!

- Comfortable Patient Support
- Fits all patients
- Tough & Durable
- Reduces Motion Artifact
- Reduces Back Pain
- Technologist Inspired
- Easy to clean
- Anatomically Correct

LEGREST SET   Includes one each: CLR-807, NMC-807 and TAP-807

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

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
CLR-807

Contour Leg Rest 7"
NMC-807

Tapered Leg Rest
TAP-807

LEG REST SPECIAL OFFER
PLEASE POST FOR YOUR PATIENTS

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

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

Ideal For Supine Imaging

Thyroid   Salivary
Parathyroid   Lymph Nodes

- 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 (CAL 177)

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 (CAL 177)
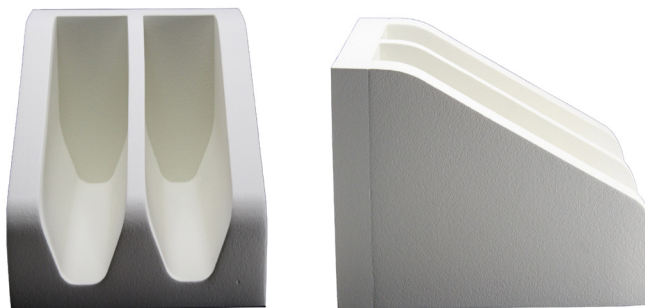
Dimensions: 14" W x 18" D x 10" H

PTI-402-AFL   Ankle/Feet/Leg Immobilizer

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

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
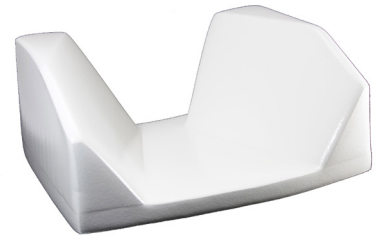
Dimensions: 20" W x 18" D x 9" H
Flat Base

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 todays 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
Flat Base

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

Radial Arm Support

- Curved support base provides stable positioning and enables use on radius style imaging surfaces
- Prevents arm & shoulder discomfort during prolonged imaging
- Patient comfort is assured via the soft coated foam surfaces
- Maintains shape during use and does not drag during table movement
- Provides total head, arm and shoulder support
- Includes reusable head support
- Seamless & liquid proof design
- Fast and easy to clean
- MRI Compliant

Dimensions:
Arm Support: 21" W x 12.25" D x 9.4" H
Head Support: 8.8" W x 10" D x 2.5" H
Curved Base

NMC-850   Radial Arm Support

Patient Arm Support

- Recommended for Single Head Imaging Systems
- Technologist 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
Flat Base

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

NMC-501U   Patient Arm Holder

Includes two disposable pillows with cases

Dimensions: 19" W x 17" D x 9.5" H
Flat Base

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

Dimensions: 29.5" L x 12" W x 3.5" H

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/loop surface mounting strips

- Carry/storage bag

Care-Cleaning: Spray and wipe clean with any water based medical grade germicidal.

DAT-HH   Imaging Head Support
Patent Pending   Black High Quality clear Carbon Fiber Finish

Integrated Head and Arm Support

- Supports patients arms while facilitating simultaneous AP head positioning
- Head positioning flaps maintain stable AP head positioning while preventing head rotation and drift
- Arm support can be used independent from the AP head positioning feature
- Velcro mounting

Dimensions: 20" W x 18" D x 9" H
Flat Base

PTI-HAS   Integrated Head and Arm Support
Includes two disposable pillows with cases & two universal head / chin straps

Imaging Body Wrap

- Compatible with Siemens Brand Body Imaging Tables already fitted with a body wrap
- 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 210 denier nylon black 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

Includes one set of
24" W x 34" L Straps

NMC-2434H   Imaging Body Wrap with Hook on Wrap
(Loop (soft) side of Velcro is on your table)

NMC-2434L   Imaging Body Wrap with Loop on Wrap
(Hook (hard) side of Velcro is on your 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

NMC-SSY   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

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"

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
- 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
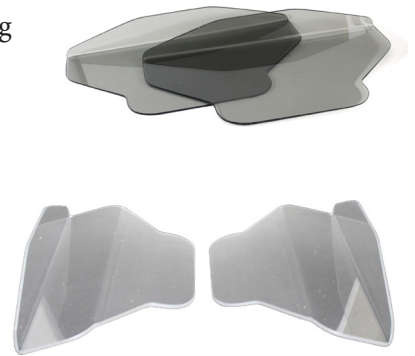
Arm & Leg Guard

- Securely holds patients arms and legs during any long procedure
- Sold by the pair
- 3/16" clear acrylic (Small, Large, XL), 1/4" clear acrylic (XXL)
- For use on tables 22" or wider
- Clean with a mild detergent

PTI-7459SM   Arm & Leg Guard, Small, 1 pair
                 11.5" W x 6.5" H x 11" D, Wt 8 lb

PTI-7459LG   Arm & Leg Guard, Large, 1 pair
                 11.5" W x 8" H x 11" D, Wt 8 lb

PTI-7459XL   Arm & Leg Guard, X-Large, 1 pair
                 28.5" W x 6.5" H x 11" 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

NMC-SAB   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
- 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
- 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, Ivory, 70" x 15" x 1"
2155-2710	Rectangular Table Pad, Ivory, 79" x 15" x 1"
2155-9215	Rectangular Table Pad, Ivory, 92" x 15" x 1"
CMDL-107161	Cardio-MD Table Pad, Ivory, 107" x 16" x 1" with Cutouts
CMDL-78161	Cardio-MD Table Pad, Ivory, 78" x 16" x 1" with Cutouts
NMC-300U	Custom Pad - Rectangular Color: Black

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 Pads: 1 Small & 1 Large
- 1 Ankle Support Pad: 12" L x 4" W x 4" H
- 8 Velcro Mounting Strips
- NMC-2096 Support Strap (See Page 90)

- 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

Anti-Static Patient Transfer Board

- 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	Anti-Static Patient Transfer Board
533-HNGR	Wall Hanger for Anti-Static Patient Transfer Board

Table Pad with Fabric Cover

- RF/Sonic Welded Seams
- Meets or Exceeds Universal Precautions Requirements
- OEM Quality
- Easy clean with any hospital grade germicide
- Custom sizes available

Spectrum Dynamics Table Pad

- Table Pad with Dartex Cover
- Fluid Proof Sonic Welded Seams
- Open cell inner foam material
- Includes 2" wide Velcro® to fasten pad to table
- Standard 1" thickness

Dimensions: 110" L x 17.1" W x 1" Thick

SD43-GREY   Spectrum Dynamics Table Pad

Sample Custom Table Pad

TOP VIEW

4.0"R x 2 places (both sides of pad)

26.0"   2.0"R   18.0"   2.0"R   8.0"   4.0"R

75.0"   8.0"   32.0"   14.50"

129.50"
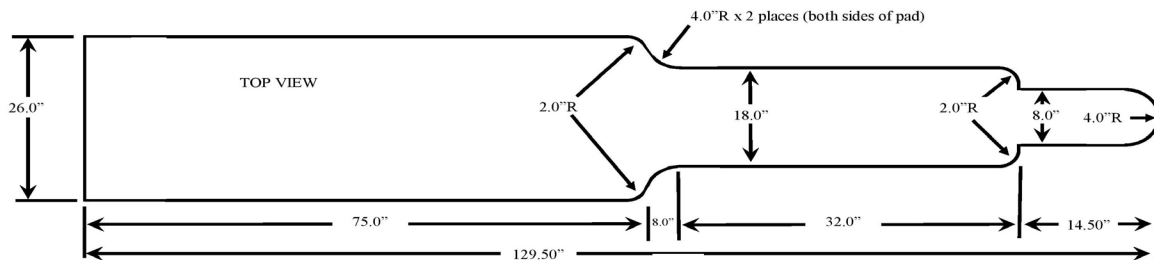
NMC-300-J   Custom Table Pad With Fabric Cover

Phlebotomy Wedge

Improve patient venous and IV access with our phlebotomy wedge. This uniquely shaped positioning aid facilitates stable arm elevation and extension while maintaining comfort and compliance.

- Cal 117 fire rated high density support foam
- Fluid proof, durable, soft polyurethane coated surfaces
- Wipe to clean using standard healthcare germicidal cleaners
- Can be used with a majority of patient extremity/hand sizes
- Color: charcoal grey

Dimensions: 10.5" L x 6" W x 2" to 5" Thick
Weight: 0.5 lbs

PW-1   Phlebotomy Wedge

Extremity & Specialty
Positioners - Blocks

Cross-Table Lateral Leg Block

Used for comparative studies of legs
10" H x 14" W x 16" L

PTI-203B   Scan Coated- Black

Leg Immobilizer

Positions and immobilizes lower extremities
6" H x 14" W x 16" L

PTI-401B   Scan Coated- Black

Spinal Wedge 45°

Oblique spine support
7" H x 7" W x 14" L

NMC-144B   Scan Coated- Black

Spinal Wedge 45°

Oblique spine support
7" H x 7" W x 21" L

NMC-145B   Scan Coated- Black

Spinal Wedge 45°

Oblique spine support
9" H x 9" W x 30" L

NMC-141B   Scan Coated- Black

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-409B   Scan Coated- Black

Adult Head Holder AP PA

**Head Positioning
6.75" H x 11.75" W x 10" L**

NMC-102B   Scan Coated- Black

Pressure Block

**Special Procedure- Skull work
5.5" H x 7.3" W x 10" L**

NMC-104B   Scan Coated- Black

AP PA Adult Head Immobilizer

**Head Immobilization in trauma, ER
7" H x 11" W x 9.25" L**

PTI-408FPC   Blue, Fluid Proof Cover

CT Head Holder

**Head Support during supine imaging
5.5" H x 9" W x 10.5" L**

CT-HH   Scan Coated- Black

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.

Scan Coated Items Subject To Availability

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

The Hugger®

Immobilizer for Infants or 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

Sold as Complete Unit Only
Individual Parts Are No Longer Available

Infant Hugger
NMC-425   Infant Hugger Complete Unit
Infant- Premature born and newborn infants up to age three (3) month
Dimension: 19" L x 9" W x 3" H
Includes: Foam Insert, Plexiglas Base, Head Restraint, Body Wrap with Arm Straps and Leg Straps

Child Hugger
NMC-426   Child Hugger Complete Unit
Child- Children four (4) months to three (3) years
Dimension: 30" L x 17.7" W x 5" H
Includes: Foam Insert, Table Adapter, Head Restraint, Body Wrap with Arm Straps and Leg Straps

Scan Coat Child Hugger
NMC-427SC Child Hugger Complete Unit - Scan Coat
Child- Children four (4) months to three (3) years
Dimension: 30" L x 17.7" W x 5" H
Includes: Foam Insert, Base, Straps, and Table Adapter

The CT Hugger®

Immobilizer for Infants and Children

- 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

Complete Unit
Dimensions: 34"L x 10.5"W x 6"H
Includes: Foam Insert (Child and Infant),
        CT Plexiglas Base, CT Head Restraint,
        CT Body Wrap with Arm Straps, CT Leg Straps

Individual parts no longer available.

NMC-200   The CT Hugger Complete Unit

Blanket Warming Cabinets

These units are designed to elevate blanket temperatures to a level that will increase patient comfort.

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
- Interior light button
- Built-in speaker for audible feedback
- Integrated button lock-out feature

Additional Features:
- L.E.D. interior lighting casts a comforting blue glow with two different intensity settings and off mode
- 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-250

- Capacity :   4-6 blankets
- Interior: 2.5 cu/ft
- Weight: 67 lbs

Outer Dimensions:
22" H x 18.5" W x 23" D

PTI-BW-350

- Capacity :   10-12 blankets
- Interior: 3.5 cu/ft
- Weight: 91 lbs

Outer Dimensions:
28" H x 18.5" W x 23" D

PTI-BW-250   Blanket Warming Cabinet, 4-6 blankets

PTI-BW-350   Blanket Warming Cabinet, 10-12 blankets

PTI-750 Holds Up To 25 Blankets!

- 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

- Capacity :   20-25 blankets
- Interior: 7.5 cu/ft
- Weight: 134 lbs

Outer Dimensions:
35.5" H x 24" W x 25.75" D

PTI-750   Blanket Warming Cabinet, 20-25 blankets

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

Pulmonex™ II Xenon System

Convenient Fold-Down Tray

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 on page 100

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 CO_2, 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

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

Specifications are subject to change

Pulmonex™ II Xenon System *continued*

Dimensions:	48.5" H x 22" D x 20.5" W	Shipping Weight:	375 lb
Motor:	UL approved. 12 volt DC	Certifications:	ETL
Electrical Requirements:	115 VAC, 1 amp, 50/60 Hz	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

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 72" Flexible Tubing with Luer-Lock Adaptor
150-317	Tubing, 72" Luer-lock adapter, 5/Pkg

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 to the Pulmonex II Xenon System to ensure a safe environment
- 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 99 pCi/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 diameter, 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

Xenon Convenience Kits™
Air-Cushioned™ Face Mask

*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

PTI-504

Xenon Convenience Kits™
Air-Cushioned™ Face Mask with Direct Dose Administration

*132-699   Face Mask Convenience Kit with Direct Dose
Includes: Bacteria filter

*PTI-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

PTI-505

Xenon Convenience Kits™
Air-Cushioned™ Face Mask with Injection Port

*PTI-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

132-774

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

134-772

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,
and 90° luer-lock injection port

132-684

* Sold in multiples of (25)

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

NMC-309

Disposable Ventilation Circuit

NMC-309   Face Mask with Injection Adapter, 20/Box
Includes: 24" Tube & Bacteria filter

Disposable Masks

PTI-1695

*PTI-1695   Air-Cushioned™ Face Mask w/ Injection Port, Adult

*PTI-5070   Air-Cushioned™ Face Mask w/o Injection Port, Adult

*PTI-1698   Direct Dose Sealflex™, Mask, Lg Adult

PTI-5070

PTI-1698

Accessories

Drierite Moisture Absorber- Blue & White Blend

NMC-0027   Drierite, 1 lb
NMC-0039   Drierite, 4.5 lb
132-772   DISP-DR Disposable Drierite Cartridge

Soda-Lime CO_2 Absorber

130-019

130-019   Soda-Lime, 1 lb
130-020   Soda-Lime, 4.5 lb
132-773   DISP-SL Disposable Soda-Lime Cartridge

139-677

139-677   Face Mask Harness, Adult
*130-551   Tru-fit Disposable Mouthpiece

130-551

132-555   Refillable Cartridge, Soda-Lime or Drierite

130-639   Tubing Splice, 22 mm male, 10/pkg

130-639

132-772   DISP-DR Disposable Drierite Cartridge

*132-750   Bacteria/ Viral Disposable Filter Single Use

132-750

* Sold in multiples of (25)

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
- Contour 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 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.

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, 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.

1 Insert Venti-Scan IV Kit in canister

2 Inject Tc-99m DTPA

3 Connect to O$_2$ supply; position patient comfortably for resistance-free breathing

177-090	Venti-Scan IV Canister	
	Includes: Shielded canister with IV pole mount	
177-091	Venti-Scan IV Disposable Radioaerosol Kit	
LATEX FREE	*(Minimum order of 15, then sold in increments of 5)*	
	Includes: 12″ tubing, small particle delivery system with mouthpiece, filter, nose clip and disposable bag	
177-092	Venti-Scan IV Disposable Radioaerosol Kit	
LATEX FREE	*(Minimum order of 15, then sold in increments of 5)*	
	Includes: 24″ tubing, small particle delivery system with mouthpiece, filter, nose clip and disposable bag	
177-075	Venti-Pak Disposable Radioaerosol Kit *(Sold in increments of 5)*	
	(adapter kit for ventilator assisted patients)	

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
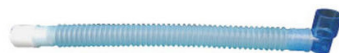
177-325

CA-1124	AeroTech I Disposable Radioaerosol Kit *(Must order in increments of 10)* *Includes: 24″ tubing, standard nebulizer delivery system with mouthpiece, bacteria filter, nose clip and disposable bag*
CA-1324	AeroTech I Disposable Radioaerosol Kit *(Must order in increments of 10)* *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)*

Free Breathing Pulmonex™ Hose Kit

- 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
- Contains two 130-901, two 130-904 hose clamps, and a 130-902 non-rebreathing anesthesia valve

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

Xenon-133 Rebreathing System

- 35 liter bag provides ample volume for patient maintenance and collects expired Xenon-133.
- This disposable system is constructed of a non-permeable plastic, thereby precluding xenon absorption or transfer through the device's components. The system is designed to accept any xenon syringe/gun administration system.

060-133

*060-133   Xenon-133 Rebreathing System, Mouthpiece
Includes: Mouthpiece

*060-137   Xenon-133 Rebreathing System, Adult
*Includes: Air-Cushioned Face Mask with
Direct Dose Administration (132-698)*

* Minimum order of 10, then sold in multiples of (5)

Insta/Vent™ Aero/Vent™ Radioaerosol System

Insta/Vent Shield	Insta/Vent Single	Insta/Vent Plus	Aero/Vent Plus	Aero/Vent Jr (Pole Mount)
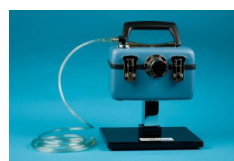
IV-600   Insta/Vent System, single tube, (24/case)
IV-600M   Insta/Vent System, with Mask, single tube (24/case)
IV-600PM   Insta/Vent System, with Mask, Two tube (24/case)

IV-600P   Insta/Vent Plus System, two tube (24/case)
IV-601-A   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-500   Aero/Vent Max Two Tube (24/case)

AV-100HM   Aero/Vent Jr Two Tube with Mask (24/case)
AV-100H   Aero/Vent Jr System, two tube (24/case)
AV-101A   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 µA 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
Common Mode 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 nA DC
Electrodeoffset Potential: ± 0.5V
Sensitivity: 100mV peak

Display

Display Area: Height = 98 mm; Width= 132.48 mm
Display indicates: heart rate, R-R interval, ECG size, ECG lead selection, audio, freeze and print indicator, R trigger event marker. Menu driven selection of parameters displayed on 16 color TFT Active Matrix Display

Outputs

1) The R trigger 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 35 mA of current or drive up to 150 feet long RGU 174/U cable. R trigger is compatible with all computers including Digirad, GE, Hitachi, MDS, Philips, Siemens and Toshiba.
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 x 2000 available on a BNC connector

Dimensions: 6" H x 9" W x 7" D
Construction: Aluminum
Power: 100-240 V - 60/50 Hz   .30/.15A

Thermal Chart Recorder:

Paper Speed: 25 mm per sec. When FREEZE is selected, recorder prints last 8 seconds of data.
Printing Method: Thermal line dot system
Resolution: Horizontal-8 dots per mm. Vertical-16 lines per mm.
Event Marker: When R Wave is detected, a mark is superimposed on the R Wave to indicate the presence of an R trigger signal triggering the computer.

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 189-080
189-085	Patient Cable for 189-079 and 189-080

Model 7600 Cardiac Trigger Monitor

- Used in applications requiring precision ECG R-wave synchronization
- Easy to use; menu driven, touch screen interface

Specifications:

ECG:
Lead Selection
Trigger Lead: LI, LII, LIII and Auto
Second Lead: LI, LII and LIII

Patient Cable
4 lead patient cable with 6 Pin AAMI standard connector. Isolated from ground related circuits by > 4 kV rms, 5.5 kV peak

Electrode Impedance Measurement
Technique: 10Hz ac signal < 10 uA rms
Range: 200 kO per lead
Accuracy :   ±3% ±1kO
Recommended Electrode: 10% Chloride sponge type
                        (590436)

Cardiotach
Range :   10-350 BPM (Pediatric/Neonate)
            10-300 BPM (Adult)
Accuracy: ±1% ±1 BPM
Resolution: 1 BPM
Sensitivity: 300 µV peak
Tall T Wave Rejection: Rejects T waves = 1.2 * R-wave

Pacer Pulse Rejection
Width: 0.1-2 ms at ±2 to ±700 mV

Alarms
High Rate: 15 to 250 BPM in 5 BPM increments
Low Rate: 10 to 245 BPM in 5 BPM increments
Asystole: R to R interval >6 seconds

Model 7600	Cardiac Trigger Monitor
7600-C	Optional Chart Recorder
590478	Patient Cable- use with 4 leads, 10' long
590433	Patient Leads- 4 lead set-grabber style, 24" long

Accessories for Model 3100/3150

590476	Patient Cable- use with 3 leads, 10' long
590483	Patient Leads-3 lead set-grabber style, 24" long

Accessories for Model 3000

590476	Patient Cable- use with 3 leads, 10' long
590407	Patient Leads- 3 lead set-grabber style, 24" long

Most Commonly used with Siemens integrated module SPECT systems

590481	Patient Cable- AHA trunk cable use with 3 leads, 40" long
590413	Patient Leads- AHA ECG 3 lead set, 40" long

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: T.5A, 250V
Maximum ac Power
Consumption: 45VA
Power Recovery: Automatic, if power is
                        restored within 30 sec.

Optional Recorder:
Writing Method: Direct Thermal

Synchronized Output (Trigger)
Test input signal at ECG Leads
Conditions: ½ sine wave, 60ms width,
            1mV amplitude, 1 pulse/second
Output Trigger Delay: < 10 ms
R to R Trigger Accuracy: ±75 µs typical
                          @ 1 mV input
Pulse Width: 100 ms
Pulse Amplitude: 0 to +5V
Output Impedence: <100 O

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

Model 14C Survey Meter
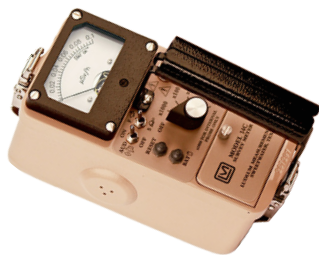
The Model 14C General Purpose Survey Meter features a 5-range analog ratemeter and operates two detectors; a built-in internal GM Detecter (0-2000 mR/hr) and an external GM or Scintillation Detector. The cast aluminum housing, with its separate battery compartment and accompanying metal handle, offer an industrial robustness and quality that promotes long-lasting protection and instrument life. The front panel controls include a rotary switch for selecting the five-decade range and instrument shut-off, an audio on/off switch, a fast/slow response switch, a high-voltage display button and a battery test button. A 39" straight type detector cable with "C" style connector is included.

Application: Alpha, Beta and Gamma surveying
                    Energy compensated GM (used with x 1000 scale only)
Internal Detector: Range 0-20 mSv/hr (0-2000 mR/hr)
                                    Sensitivity 200 cpm per mR/hr
Compatible External Detectors: Any GM or Scintillation
                                    operating on 900 VDC
Detector Channels:
External: x0.1 through x100 range settings
Internal GM: x1000 setting
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
Meter Dial: 0-2 mR/hr, 0-5 kcpm, BAT TEST (others available)
Meter: 6.4 cm (2.5 in) arc, 1 mA analog type
Rotary Selector Switch: Switches between Off,
                    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
Controls:
Reset Push Button: Zeroes meter
Battery Push Button: Checks battery status
Audio Switch: Audio on/off, built-in unimorph speaker,
                    greater than 60 dB at 0.6 meters (2 ft)
High Voltage: 900 Vdc
Threshold: -40 mV to 10 mV
Temperature Range: -20 to 50°C (-4 to 122° F)
Relative Humidity: < 95%
Power: 2 each "D" cell batteries
Battery Life: Typically greater than 2000 hours
Construction: Cast and drawn aluminum with beige powder coat
Connector: Series "C" (others available)
Size: 6.5" H x 3.5" W x 8.5" L
Weight: 3.5 lb (including batteries)

051-016	Model 14C Survey Meter, only
	Probe not included, see page 131
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 µCi
051-197	Check Source With Stick On Holder
	Cs-137 0.25 µCi
051-166	Check Source Holder

Model 3 Survey Meter

The Model 3 General Purpose Survey Meter features a 4-range analog ratemeter and supports GM & Scintillation Type Detectors. Known for its accuracy and long-lasting dependability, it comes in a variety of measurement ranges and units to support the external radiation detector selected. The cast aluminum 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.

Application: Alpha, Beta and Gamma surveying
Compatible Detectors: GM, Scintillation
Linearity: reading within 10% of true value with detector connected
Meter Dial: 0-2 mR/hr, or 0-500 kcpm, BAT TEST (others available)
Meter: 6.4 cm (2.5 in) arc, 1 mA analog type
Controls:
Rotary Selector Switch: Switches between instrument Off, Battery check,
                    Range: x0.1, x1, x10, x100
Response Switch: Toggles between FAST (4 sec) or SLOW (22 sec)
                    from 10% to 90% of final reading
Reset: Push Button: Zeroes meter
Audio Switch: Audio on/off, built-in unimorph speaker,
                    60 dB at 0.6 meters
Calibration Controls: Accessible from front of instrument
                    (protective cover provided)
High Voltage: Adjustable from 400 to 1500 Vdc
Threshold: Fixed at -35 mV ± 10 mV
Temperature Range: -20 to 50°C (-4 to 122° F)
Power: 2 each "D" cell batteries
Battery Life: Typically greater than 2000 hours
Construction: Cast and drawn aluminum with beige powder coat
Connector: Series "C" (others available)
Size: 6.5" H x 3.5" W x 8.5" D
Weight: 3.5 lb (including batteries)

051-003	Model 3 Survey Meter, only
	Probe not included, see page 111
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

Select Probe from page 116

Model 14C Survey Meter
Pancake GM Probe / Dose Compenation Filter

Ideal for RA-223

The Model 14C Survey Meter meets the essential monitoring and surveying needs of most nuclear medicine facilities. This meter is capable of reading Alpha, Beta and Gamma emissions. The Pancake GM Probe with removable Energy Compensation Filter facilitates measuring Ambient Equivalent Dose (Sieverts).

Application: Alpha, Beta and Gamma surveying
    Energy compensated GM (used with x 1000 scale only)
Internal Detector: Range 0-20 mSv/hr (0-2000 mR/hr)
    Sensitivity 200 cpm per mR/hr
Compatible External Detectors: Any GM or Scintillation
    operating on 900 VDC

Detector Channels:
External: x0.1 through x100 range settings
Internal GM: x1000 setting
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
Meter Dial: 0-2 mR/hr, 0-5 kcpm, BAT TEST (others available)
Meter: 6.4 cm (2.5 in) arc, 1 mA analog type
Rotary Selector Switch: Switches between Off,
    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
Controls:
Reset Push Button: Zeroes meter
Battery Push Button: Checks battery status
Audio Switch: Audio on/off, built-in unimorph speaker,
    greater than 60 dB at 0.6 meters (2 ft)

High Voltage: 900 Vdc
Threshold: -40 mV to 10 mV
Temperature Range: -20 to 50°C (-4 to 122° F)
Relative Humidity: < 95%
Power: 2 each "D" cell batteries
Battery Life: Typically greater than 2000 hours
Construction: Cast and drawn aluminum with beige powder coat
Connector: Series "C" (others available)
Size: 6.5" H x 3.5" W x 8.5" L
Weight: 3.5 lb (including batteries)

Specifications: Pancake GM Probe w/ Dose Compensation Filter
Indicated Use: Alpha, Beta, and Gamma surveying; sample counting
Detector: Pancake-type halogen quenched GM
Window: 1.7 ± 0.3 mg/cm^2 mica, protected by a stainless steel screen
Window Area: 15.5 cm^2 Active, 12.3 cm^2 Open
Efficiency (4pi): 5% - C-14, 22% - Sr-90/Y-90, 19% - Tc-99, 32% - P-32,
    15% - Pu-239, 0.2% - I-125, $\leq$ 1% - 99mTc
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
with Dose Compensation Filter

Includes: Internal Energy-Compensated GM Detector,

External Pancake GM Probe with

Dose Compensation 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

Quote Builder is a function of our website which allows you to request a quote at any time. Similar to online shopping, you can view our products online and add the items you are interested in to your cart.

Your quote request will be sent to you during normal business hours.

Request a Quote

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

Model 3000 shown with optional Model 44-2 Gamma Detector

Select Probe from page 116

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 μSv/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.

Compatible Detectors:	GM, Scintillator or Proportional
LCD Display:	3 digit LCD with large 20 mm (0.8 in.) digits, low-battery indicator, MAX, ALARM, AUDIO
Units:	(k)cps, (k)cpm, (k)Bq, (k)dpm, (μ)(m)R(/h), (μ)(m)Sv(/h)
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 μR/h to 999 R/h; 0.00 μSv/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)
On/Off/ACK:	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.
Controls:	
Audio :	Turn "click" audio On/Off, Turn Sigma Audio beep On/Off
Units :	Changes the units between count rate (cpm, cps), dose/exposure (μSv/h, mR/h) or disintegration (dpm, Bq)
Response Time:	User-selectable from 1 to 60 seconds, or Auto-Response Rate Fast or Slow
Alarms:	Count rate, Exposure/Dose and Sclaer alarm setpoints adjustable over the display range
Loss of Count Alarm Protection:	After preselected time interval (default 60 seconds) of no pulses from detector, audible and visual alarms will be activated
High Voltage:	400 to 1500 Vdc
Overload:	High count rate saturation protection prevents false display of lower count rates
Audio:	< 75 dB at 0.6 (2 ft), approximately 4.5 kHz
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 53
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
Size:	6.5 " H x 4.5" W x 8.5" L
Weight:	2.0 lb

Probe Not Included. See page 116

DSM-3000	Digital Survey Meter
051-198	Check Source With Stick On Source Holder, 1.0 uCi Cs-137

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

Model 9 DP Pressurized Ion Chamber

Features
- 0 to 50 mSv/h (0 to 5 R/hr) Range with µR/hr Sensitivity
- Sunlight Readable Color Display
- Auto Zeroing & Ranging
- Rechargeable Batteries
- Alarms
- Rate, Integrate & Peak Hold Readouts
- Data Logging
- USB Connectivity
- Free Firmware Updates through Internet

The Model 9DP pressurized ion chamber meter provides highly sensitive measurements of exposure and exposure rate. It can simultaneously display the exposure rate and integrated value or the highest rate seen by the instrument. The stunning 256-color bit-mapped display provides an optimized presentation of the data and is accompanied with icons informing the user of the active functions and instrument status. All logged data are written in csv format to a plugged-in, industry standard USB thumb drive for convenient retrieval by a PC spreadsheet or database program. Alarms are manifested using color changes on the display and an audio output.

The state-of-the-art technology of the Model 9DP delivers tremendous capability, user friendliness and convenient PC connectivity. The built-in USB port facilitates password-protected access to parameter settings via direct connection to a standard USB keyboard, thus foregoing any need to install PC application software or dealing with operating system compatibility issues.

Radiation Detected:	Gamma & X-rays above 25 keV
	Beta above 1 MeV
Detection Range:	R/hr units: 0 - 500 µR/hr, 0 - 5 mR/hr, 0 - 50 mR/hr, 0 - 500 mR /hr, 0 - 5 R/hr
	Sv/h units: 0 - 5 µSv/h, 0 - 50 µSv/h, 0 - 500 µSv/h, 0 - 5 mSv/h, 0 - 50 mSv/h
Chamber Volume:	230 cm³ (14 in³) volume pressurized to 9 atm (122 psig)
Accuracy:	± 10%
LCD Display:	8.9 cm (3.5 in.) diagonal; 240 x 320 (H x W) pixels; TFT active matrix; 262,000 colors; 220 cd/m2
Measurement Readouts:	Simultaneous display of rate, integrated reading, and highest rate (peak hold)
User Controls:	4 Pushbuttons:
	* Instrument On / Off
	* Peak rate / Integrate mode
	* Audio On / Off
	* Alarm acknowledge / Meter reset / Clearing integrated dose or peak rate
Automatic Functions:	Auto ranging, Auto zeroing, Auto LCD backlighting
Response Time:	5 s in lowest range, 2 s in all other ranges, when measuring from 10% to 90% of final value
Alarms:	Two levels of radiation alarms available, each are user programmable throughout entire
	readout range and set through a PC interface program.
	Other alarms include low battery and various detector failures.
Audio Outputs:	Built-in unimorph speaker, > 60 dB at 0.6 meters (2 ft.)
	An optional audio jack can be installed for connecting to an external headset.
Temperature Range:	-20 to 40 °C (-4 to 104 °F)
Power:	Eight rechargeable "AA" NiMH batteries,
	supplied with wall charger for direct connection to instrument
Battery Life:	12 to 30 hours between charges, depending upon use of backlighting
USB Interface:	Single USB port, may be used to:
	* Connect a USB keyboard
	* Connect a USB thumbdrive for storing logged data
	* Connect to a PC with the optional interface kit for parameter editing and calibration
Data Logging:	Data is stored to detachable USB thumb drive in CSV format for easy retrieval by
	PC spreadsheet/database programs. Data points include real-time clock generated date and
	time with rate, integrated reading, and instrument status. Logging time intervals are set by
	PC interface program or standard USB keyboard.
Construction:	Durable molded plastic with internal metal support
Size:	8.6" H x 4.6" W x 9.6 " L
Weight:	3.3 lb

Model 9 DP	Pressurized Ion Chamber
Model 9-DP1	Low Pressure Ion Chamber, Non-Hazmat

Model 2241 Digital Ratemeter/Scaler

Features

- **Digital Ratemeter with Built-In Scaler**
- **Auto-Ranging**
- **Adjustable Alarms**
- **Wide Range HV**
- **Overrange & Overload Protection**

Model 2241 is a general purpose, digital ratemeter with a built-in scaler that facilitates timed counts over a user specified period. The LCD presents readings in a 4-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; and push-buttons for activating the LCD backlight and for either resetting the counts or acknowledging alarms.

Specifications:

Indicated Use:	General purpose survey, gross counting
Compatible Detectors:	GM, Proportional, Scintillation
Linearity:	Reading within 10% of true value with detector connected
Display:	4-digit 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
Display Range:	Auto ranging from: 0.0 µR/hr to 9999 R/hr, 0.000 µSv/h to 9999 Sv/h 0 cpm to 999 kcpm, 0 cps to 100 kcps
Backlight:	Pushbutton to activate
Ratemeter:	Can display in R/hr, Sv/h, cpm, or cps when selector switch is in RATE position
Scaler:	Adjustable from 1 to 9999 s (in 1 s intervals)
Alert/Alarm:	Indicated by annunciation on display and audible tone
High Voltage:	400 to 2400 V
Discriminator:	Adjustable from 2 to 100 mV
Temperature Range:	-20 to 50 °C (-4 to 122 °F)
RS-232 Port:	Available in two output formats: binary output or ASCII output. The ASCII output format option requires a firmware change (PN 4408-192).
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)
Size:	6.5" H x 3.5" W x 8.5" L
Weight	3.5 lb

Probe not included,
Select Probe from page 116

Model 2241	Digital Ratemeter/Scaler
051-196	Check Source Cs-137 1.0 µCi
051-166	Check Source Holder
051-197	Check Source With Stick On Holder Cs-137 0.25 µCi

Model 44-9 Pancake GM Probe

Indicated Use: Alpha, Beta, & Gamma survey; sample counting
Detector: Pancake-type, halogen-quenched GM
Window: 1.7 ± 0.3 mg/cm^2 mica
Window Area: 15.5 cm^2 (2.4 in^2) Active; 12.3 cm^2 (1.9 in^2) Open
Efficiency (4Π) :   5% - ^{14}C, 22% - ^{90}Sr/^{90}Y; 19% - ^{99}Tc; 32% - ^{32}P;
                 15% - ^{239}Pu, $\leq$ 1% - ^{99m}Tc; 0.2% -^{125}I
Sensitivity: Typically 3300 cpm/mR/hr
Energy Response: Energy dependent
Background: 60 cpm
Dead Time: 80 us
Operating Voltage: 900 Vdc
Connector: Series "C" (others available)
Construction: Aluminum housing with beige powder-coat finish
                 and stainless steel protective screen (79% open)
Input Sensitivity: $\geq$ -30mV
Size: 1.8" H x 2.7" W x 10.7" L
Weight: 1 lb

44-9 Probe with Exposure Filter or Dose Filter also available

051-449   Pancake GM Probe

051-230   Optional 39" "C" Series Connecting Cable

Model 44-38 Energy Compensated Beta Gamma Probe

Indicated Use: Beta-Gamma survey
Detector: Halogen quenched GM, 30-45 mg/cm^2 stainless steel wall
Detection Range: $\pm$ 10% up to 50 mR/hr without DTC
                     $\pm$ 10% up to 500 mR/hr with DTC
Sensitivity: 1200 cpm per mR/hr with window closed
Energy Response: (60 keV-1-3 MeV): within 20% of ^{137}Cs (662 kev)
Beta Cutoff: Approximately 200 keV (window open)
Background: 20 cpm Closed; 25 cpm Open
Dead Time: 95 microseconds (typical)
Operating Voltage: 900 volts
Construction: Anodized aluminum housing
Window Construction:
     Low Energy Blocking Shield: tin shields mounted on aluminum
        (1353 mg/cm^2) with solid aluminum section in the middle
     Low Energy Pass Through Window: solid aluminum (610 mg/cm^2)
Connector: Series "C"
Size: 1.3" Diameter 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/cm^2 mica
Window Area: 6 cm^2 (0.93 in^2) Active; 5 cm^2 (0.78 in^2) Open
Efficiency (4Π) : 2% - ^{14}C, 10% - ^{90}Sr/^{90}Y; 7% - ^{99}Tc; 7% - ^{239}Pu, 0.1% -^{125}I
Sensitivity(^{137}**Cs gamma**): 2100 cpm/mR/hr
Energy Response: Energy dependent
Background: 40 cpm
Dead Time: 200 microseconds (typical)
Operating Volume: 900 volts
Connector: Series "C" (others available)
Construction: Anodized aluminum housing
Size: 1.8" Diameter 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: ^{125}I and low energy gamma survey
Detector Type: NaI(Tl) scintillator, 1" Diameter x 1 mm thick
Window: 18.4 mg/cm^2
Window Area: 5 cm^2 (0.8 in^2) Active and Open
Efficiency (4Π): 33.5% - ^{125}I (based on ^{129}I efficiency of 18%)
Sensitivity: 675 cpm/μR/hr (^{125}I)
Background(10 μR/hr): 300 cpm
Recommended Energy Range: 10-60 keV
Energy Response: Energy dependant
Photomultiplier Tube: 1.5" Diameter
Operating Voltage: 500-1200 V (typical)
Connector: Series "C"
Construction: Aluminum with beige powder coat
Size: 2" Diameter 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: NaI(Tl) scintillator, 1" Diameter x 1"L thick
Efficiency: ^{125}I - 7%, ^{57}Co -10%, ^{137}Cs - 3%, ^{60}Co - 3%
Sensitivity (^{137}Cs gamma):   175 cpm/μR/hr
Recommended Energy Range: 20 KeV - 1.5 MeV
Energy Response: Energy dependant
Background: 1800 cpm
Photomultiplier Tube: 1.123" Diameter, magnetically shielded
Operating Voltage: 500-1200 V
Temperature Range: 5 to 122° F, may be certified for -40 to 150°F
Connector: Series "C"
Construction: Aluminum with beige powder coat
Size: 2" Diameter x 7.3" L
Weight: 1 lb

44-2   Model 44-2 Gamma Scintillator Probe
051-230   Optional 39" "C" Series Connecting Cable

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.

Features:
- Measurement and display in µSv/hr or mRem/hr
- 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
- Built-in self-diagnostics complies with ANSI N42.33 and IEC 60846 standards

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 µSv/hr to 100 mSv/hr or from 1 µrem/hr to 10 rem/hr
- Dose rate linearity: ± 10% ±1 digit within the range of 0.1 µSv/h to 100 mSv/h or 10 µrem/h to 10 rem/h
- Calibration accuracy: ±5 % of the reading in 137Cs exposure, at 3 mSv/h, ± 20° C (68°F)
- Energy response: ± 30% over the range of 48 keV - 3 MeV
- Angular response: ± 25% within ± 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
- Dose Rate: Follow-up by audible signal with frequency proportional to dose rate
- Dose Measurement: (µSv / mRem)
- Built-in Infrared port (IrDA)

Mechanical Characteristics:
- Case :   rugged plastic, easy to decontaminate
- Dimensions: 3" W x 5" L x 1.25" D
- 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)

RDS-30/MR   Digital Handheld Dose Rate Meter (mRem/h)

Integrated Frisker

Dimensions: 10.7" L x 2.7" W x 1.8" H
Weight: 1 lb

Features
- Integrated, Lightweight Design Simplifies Frisking
- High-Impact Plastic with Water-Resistant Rubber Seals
- Employs Standard 15.51 cm2 GM Pancake Detector
- Displays in mR/hr, μSv/h, dpm, Bq, cpm, or cps
- Dead-Time Correction (DTC) Allows Gamma Measurements Up to 500 mR/hr or Up to 1999 μSv/h
- Simple Three-Button Operation
- Count Rate, Dose/Exposure, and Counting Alarms
- Automatic Display Backlight
- Bright Red Flashing ALARM LED
- Includes Wrist Strap, Clear Pancake Cover & Ludlum Lanyard

Specifications:
Detector:	Pancake GM detector, stainless steel screen (79% open)
Window Area:	Active 15.51 cm2 (2.4 in2) Open - 12.26 cm2 (1.9 in2)
Efficiency:	Alpha 239Pu : 11%, 99Tc : 18%, 32P : 32%
	Beta 14C : 2%, 90Sr/Y : 22%, 125I : 0.2%
	Gamma 137Cs : 5.5 cps per μSv/hr (3300 cpm per mR/hr), 99mTc : ≤ 1%
LCD Display:	3½ digit LCD with large 12.7 mm (0.5 in.) digits, low-battery indicator, MAX, ALARM
	Units: (k)cps, (k)cpm, (k)dpm, (k)Bq, mR/hr, μSv/h, Bq, and dpm
Range:	0.1 cps to 19.9 kcps, 1 cpm to 999 kcpm, 0.0 to 500 mR/hr, 0.01 to 1999 μSv/h, 0.1 to 19.9 kBq
Backlight:	Built-in ambient light sensor automatically activates low-power LED backlight, or may be configured for 'Continuous On' operations (will reduce battery life)
Controls:	ON / OFF / Quiet
	Mode: Alternates between: NORMAL : count rate MAX : captures peak rate
	COUNT : user-selectable preset count time from 0 to 20 min.
	Units: Changes units between: Count rate (cpm, cps), Dose/Exposure (μSv/h, mR/hr), Activity (dpm/Bq)
Response Time:	User-selectable from 1 to 60 s, or automatic FAST or SLOW
Resolving Time:	Approximately 110 μs as defined by IEC 60325
Alarms :	Count rate and scaler alarm setpoints adjustable over the display range
Zero Protection:	After 60 s of no pulses from detector, unit will flash a zero reading and the alarm audio will be triggered
Overload:	High rate saturation protection, indicated by flashing display and audio alarm, prevents false display of lower count rates
Click Audio:	Greater than 60 dB at 0.6 m (2 ft)
Temperature Range:	-20 to 50 °C (-4 to 122 °F) May be certified for operation from -40 to 65 °C (-40 to 150 °F)
Power:	Two "AA" batteries
Battery Life:	Approximately 1000 hours of operations (16-hour low battery warning) (as low as 500 hours with backlight configured for 'Continuous On')

PTI-IFW   Integrated Frisker

Radiation Survey Meter

- H*(10) dose equivalent rate according to latest standards
- External alpha, beta, gamma and neutron probes for direct connection
- RDS-32WR meter for wider dose rate range
- iTx versions for wireless monitoring
- 4-way navigation keys, practical shortcuts
- Intuitive user interface
- Large graphic screen, configurable backlight
- Automatic display rotation with tilt sensor
- High impact durable case construction, IP67 immersion proof
- Internal memory allows versatile histogram functions and the ability to manually store measurements
- Configuration and firmware upgrade done through the CSW-32™ Software with a USB cable-link
- Complies with IEC 60846 standards, designed to meet ANSI 42.17A, 42.17C standards

RDS-32   **Handheld Radiation Survey Meter**

5230-0010   **Pancake Probe GMP-25 with Fixed Coil Cable**

Surface Contamination Meter

- Wide measurement range: up to 100 000 cps or 1 000 000 Bq/cm2
- Standard surface contamination measurements in cps or Bq/cm2
- Contamination measurements with histogram function
- Visual and audible alarms
- Handy and easy-to-use design
- Software for parameter setting, histogram readings and nuclide calibration complies with IEC 60325 standard

RDS-80   **Surface Contamination Meter**

Monitor 4 Survey Meter

Ranger Survey Meter

078-510   **078-513**   **078-514**

- 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)

- 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, uSv/hr, CPM and CPS
- 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 1.5- 2.0 mg/cm^2 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
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" L x 2.75" W x 1.87" D

Weight: 9.7 oz including battery
7.2 oz without battery

Specifications:

Detector: Halogen-quenched uncompensated GM tube with thin mica window, 1.4- 2.0 mg/cm^2 area density

Window: 1.77" effective diameter

Display: Backlit graphic LCD with backlight

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%. Detects Gamma down to 10 KeV through the end window.

Accuracy (Referenced to Cs-137): Typically ±15% from factory

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: USB

Menu: Options accessed by holding down menu button. Pressing the menu button toggles you through functions. Select "+" or "-" to change setting.

Built-In Efficiencies: [35]Sulfur(S35), [90]Strontium (Sr/y90), [137]Cesium (Cs137), [32]Phosphorus (P32), [14]Carbon (C14), [131]Iodine (I131), [60]Cobalt (Co60), and Alpha

Power Requirements: (2) AA alkaline batteries, included

Dimensions: 2.7" W x 1.3" D x 5.5" H

Weight: 8 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 0.5" thick lead lining in left and right side walls

078-510	Ranger Survey Meter *Includes: Case, boot, stand, mini USB cable, Observer USB software download and certificate of compliance*
078-513	Ranger Survey Meter *Includes: 078-510, wipe test plate*

078-400	Monitor 4 Survey Meter *Includes: Protective case (battery not included)*

Model 177 Alarm Ratemeter

Model 177 Alarm Ratemeter with Pancake GM Probe and Foot Monitor

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.

Specifications:
Application: Multi-purpose radiation monitoring, surveying; frisking
Compatible Detectors: GM, scintillation
Linearity: Within 5% of full scale
Meter Dial: 0-500 cpm, 0-1.5 kV, BAT TEST
Meter: 6.4 x 6.4 cm (2.5 x 2.5 in) 1 mA, DC movement
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
Alarm Set: Front-panel locking control allowing alarm to be set at any point on the meter (can be read on meter)
Reset: Push-button to zero meter and/or reset alarm
Calibration Controls: Accessible from back of instrument (protective cover provided)
Alarm: Indicated by red lamp and audible tone (greater than 60 dB at 61 cm (2 ft)
High Voltage: Adjustable from 400 to 1500 volts
Input Sensitivity: Adjustable from -10 to -100 mV
Audio: Built-in unimorph speaker, with volume control, to provide click-per-event audio or audible alarm indicator
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 and 6-volt sealed lead-acid rechargeable battery (built-in)
Battery Life: Typically 50 hours in non-alarm condition (battery condition can be checked on meter)
Battery Charger: Battery is continuously trickle-charged when instrument is connected to line power and turned on

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 116

- 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 116

Model 44-26 Pancake GM Foot Frisker Specifications:
Indicted Use: alpha, beta, gamma foot monitor
Detector Type: 3 pancake-type, halogen quenched GMs
Window: $1.7 + 0.3$ mg/cm^2 mica
Window Area: Active 46 cm^2, Open 27 cm^2
Efficiency: ^{14}C-5%, ^{90}Sr/^{90}Y-22%, ^{99}Tc-19%, ^{32}P-32%, ^{239}PU-15%
(4pi geometry)
Energy Response: Energy dependent
Sensitivity: 9900 cpm/mR/hr
Background: 180 cpm
Operating Voltage: 900V
Construction: Aluminum housing
Dimensions: 10.8" H x 7" W x 9" L
Weight: 4.4 lb
Cable: 60"
Connectors: Type "C"
                  ("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

Digital Area Monitor
Available in mR/hr or μSv/hr

Features:
- Affordable Area Monitor
- 1μSv/h to 10 mS/h (0.1 mR/hr to 1 R/hr)
- Integrated Design
- Battery Backup
- Networkable
- Audio & Visual Alarms

Designed for visibility and ease of use. This monitor incorporates an internally housed energy compensated GM detector with a range from 1 μSv/h to 10 mSv/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:
Application:	Gamma monitoring
Detector:	Energy compensated GM
Operating Range:	1 μSv/h to 10 mSv/h (0.1 mR/hr to 1 R/hr)
Display:	4-digit LED display with 2 cm character height
Display Range:	000.0- 9999 (Series One: 00.00 to 9999)
Display Units:	μR/hr, mR/hr, R/hr, μSv/h, mSv/h, Sv/h, μrem/hr, mrem/hr, rem/hr, cpm, cps, and others
Linearity:	Reading within ± 10% of true value with detector connected

Response: Typically three seconds (10%- 90% of final reading)
Instrument Status: Green Light instrument functioning properly
Low Alarm: Yellow Light and Slow Beep (one per second) audible tone (can be set at any point from 0.0- 9999)
High Alarm: Red Light and fast beep (4 per second) audible tone (can be set at any point from 0.0- 9999)
Low Battery: Yellow Light indicates less than two hours of battery power remaining
Overload: Senses detector saturation (indicated by display reading "- OL - ")
Overrange: Indicates radiation field being measured has exceeded counting range of instrument
Calibration Controls: Accessible from front of instrument (protective cover provided)
High Voltage: User-adjustable from 450- 2500 volts
Dead Time: User-adjustable to compensate for dead time of detector and electronics (can be read on display)
Audio: Can vary from approximately 68 dB through operation of the external rotary baffle and the internal voltage connection
RS-232 Output: A 2-second dump for computer data logging
Remote Display: Optional relay output available for connecting remote displays
Ethernet: Optional 10 Base-T connection for use with Ludlum Model 375 software
Temperature Range: -15 to 50º C (5-122º F) May be certified for operation from -40 to 65º C (-40 to 150º F)
Power: 9 Vdc wall-mount adapter with four sets of prongs for almost any style wall receptacle
Battery Life: 48 hours in non-alarm condition (typical) 12 hours in alarm condition (typical)
Battery Charger: Battery is continuously trickle charged when instrument is connected to line power and turned on
Construction: Aluminum housing with ivory powder coat finish
Dimensions: 7.4" H x 9.7" W x 2.5" D
Weight: 4.7 lb

051-275   Digital Area Monitor, 90-260 Vdc

Includes: Built-in GM Gamma Detector

Display is in mR/hr

Surface / Waste
Contamination Monitor
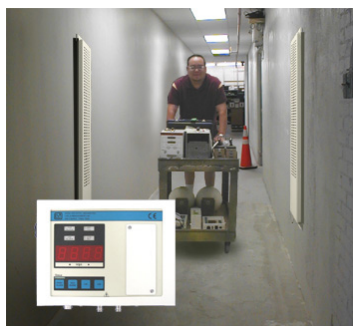
- Excellent Surface Contamination Screening Tool for:
  - Small articles
  - Baggage
  - Packages
  - Medical Waste
- Affordable Digital Controller
- Dual Large Plastic Scintillator Detectors
- Programmable Alarms
- Networkable
- Battery Backup

- The Model 375P-336 is a Digital Model 375 Controller coupled to two 2753 cm³ (168 in³) 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 allows 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 uR/hr, mR/hr, R/hr, uSv/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: Red ALARM light and adjustable audible tone (can be set at any point from 0.0 to 999 sigma)
Sum Alarm: (for 2 detector system) indicated by Red ALARM light and audible tone
(can be set at any point from 0.0 to 9999 kcps)
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 Light indicates less than 2 hours of battery power remaining (when AC power is off)

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)
Temperature Range: 5° to 122 °F
Power: 95-135 Vac (178-240 Vac available), 50-60 Hz, 6 V sealed lead-acid rechargeable battery (built-in)
Battery Life: Typically 24 hours in non-alarm condition
Battery Charger: Battery is continuously trickle-charged when connected to line power and turned on
Construction: Aluminum housing with ivory powder-coat
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
N21R-LED	Horn/ Strobe LED Light
APC-336	Aluminum Protection for Detector

Electronic Personal Dosimeter

- Light Weight and Slim Design
  2 oz.   4.3" L x 1.2" W x .5" D
- X-ray and Gamma Radiation Monitoring
- Audible Alarm

Specifications:
Radiation Detected:	Gamma and X-ray (35 keV to 3 MeV)
Detector:	Silicon semiconductor
Measurement and Display Range	
Accumulated Dose:	0.1 mrem to 99.99 rem (*automatically deleted when switched 'On'*)
	0.001 mSv to 999.9 mSv
Dose Rate*:	0.1 mrem/hr to 99.99 rem/hr
	0.001 mSv/h to 999.9 mSv/h
Display:	4-digit OLED with indicators for dose, dose rate, operating time and alarm
Accuracy:	≤ ±10% (0.01 to 999.9 mSv (1.0 mrem to 99.99 rem), 137Cs)
Energy Response:	≤ ±20% (60 keV to 1.5 MeV, 137Cs)
Angular Response:	≤ ±20% (Up to ± 60 degree vertical and horizontal, 137Cs)
Dose Rate Linearity*:	≤ ±10% (137Cs)
Alarm Volume:	Approximately 60 dB (at 20 cm)
Environment:	-10 to 40 °C (14 to 104 °F)
	≤ 90% relative humidity (non-condensing)
Power:	One each coin-type lithium battery (CR2450, P/N 21-8639)
Battery Life:	720 hours (without alarm / communication)

*Note: The instrument indicates rough value for dose rate measurements in low radiation fields, such as less than 1 mSv/h (100 mrem/h), so it should only be used for reference.

PTI-EPDR   Electronic Personal Dosimeter, mR

Quote Builder is a function of our website which allows you to request a quote at any time. Similar to online shopping, you can view our products online and add the items you are interested in to your cart.

Your quote request will be sent to you during normal business hours.

Request a Quote

Direct Reading Dosimeters

The Direct-Reading Dosimeter is a pocket-size, carbon-fiber electroscope with an ion chamber for detecting and indication of integrated exposure to Gamma and X-Ray radiation. It has a thin wall which permits the penetration and detection of radiation. This model comes with a hardened sapphire window that won't scratch even in the toughest of conditions.

Specifications:

Radiation Detected:	Gamma and X-Ray from 16 keV to 6 MeV
Detector:	Fiber-Electrometer mounted in an Electrically Conductive Plastic Ion Chamber
Detector Housing:	Very low permeability plastics - Hermetically-Sealed
Accuracy:	+/− 10% of true exposure
Rate Response:	Dose rate independent for Gamma and X-Ray
Electrical Leakage:	Less than 1.0% of full scale for 24 hours at 50 C
Temperature Range:	-20°C to +50°C
Relative Humidity:	Up to 90%
Dimensions:	4.5" (12.4 cm) Length X .6" (1.5 cm) Diameter
Weight:	1.0 oz.
Finish:	Natural Matte Black with a Metal Clip

019-201	Direct Reading Dosimeter, 0-200 mR
019-500	Direct Reading Dosimeter, 0-500 mR
019-010	Direct Reading Dosimeter, 0-2 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

Personal Radiation Monitor

Features
- Dose Rate Range: 0 to 999 R/hr
- Accumulated Dose Range: 0 to 999 R
- Loud Alarms
- Easy to Use
- Backlit LCD Display

Specifications:

Display Range:	0.01 mR/hr to 999 R/hr
Detector:	Internal energy-compensated GM
Gamma Response:	Typically 18 cpm per mR/hr (1800 cpm per mSv/h)
Energy Range:	60 keV to 2 MeV
Display:	3½ digit backlit LCD display with a total range from 0.01 mR/hr (or mR) to 999 R/hr (or R), also displays time remaining from 19:59 to 00:01 (in hh:mm format)
Alarms:	Radiation alarms adjustable over entire range (Dose rate alert, Dose rate (hi), Accumulated dose alert, Accumulated dose (hi), Time remaining to allowed dose (hi), Detector failure alert, Low-battery)
Alarm Indications:	Distinct alerts and alarms for exposure and accumulated dose
Loss of Count:	Detector failure results in a visual and audible warning
Audio:	Built-in speaker (typically 95 dB at 30.5 cm [1 ft])
Calibration:	Requires no tools or software when exposed to a traceable radiation field
Calibrated Range:	Normally calibrated from 2 mR/hr (0.02 mSv/h) to 999 R/hr (9.99 Sv/h)
Temperature Range:	-40 to 65 °C (-40 to 150 °F)
Power:	2 each lithium coin cell batteries
Battery Life:	Typically 6000 hours (Provides 8 hours warning of low battery)
Construction:	Injection-molded plastic housing with sub-surface printed membrane front panel, completely gasketed for water resistance, supplied with rubber boot with built-in belt feed-through

Dimensions: 3" L x 2.1" W x .69" H
Weight: 5.1 oz

PTI-PRM	Personal Radiation Monitor, mR

Personal Electronic Dosimeter

The RAD-60 Personal Alarm Dosimeter is a precise radiation measuring instrument for reliable detection and registration of radiation in order to ensure the personal safety of the user. It is suitable for a broad range of everyday radiation monitoring purposes in stand alone conditions.

- Reader Communication: By infrared through bottom part; By using ADR-1Reader Head in combination with Mirion PC software
- Radiation Detected: Gamma and X-rays
- Detectors: Energy compensated Si-Diode
- Measurement Range:
  - Dose: 1 μSv - 9.99 Sv or 0.1 mRem - 999 Rem
  - Dose Rate: 5 μSv/h - 3 Sv/h or 0.5 mRem/h - 300 Rem/h
- Calibration Accuracy: Better than ±5% (Cs-137, 662 keV at 2 mSv/h), Hp(10)
- Energy Response:
  - Hp(10), 60 keV - 3 MeV
  - Better than ±25%, up to 6 MeV
  - Better than ±35%
- Dose Rate Linearity:
  - Better than ±15%, up to 3 Sv/h (300 Rem/h)
  - Better than ±10% for 0.005 mSv/h - 1 Sv/h (1 mRem/h-100 Rem/h)
- Audible Alarms: Eight separate alarms, sound level typically better than 85 dBA at 30 cm, integrated dose, dose rate, dose overflow, dose rate over flow at 3 Sv/h or 300 Rem/h, low battery 1 and 2, defect
-
- Dimensions: 3.1" L x 2.6" W x 0.8" H (7.8 x 6.7 x 2.2 cm)
- Weight: .175 lb (.08 kg) including battery
- Power Supply: One AAA alkaline cell, life typically 1800 h in background field (dose mode)

RAD-60R   Personal Electronic Dosimeter (Rem/h)

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 ±75° angle*
- **Measurement and display:** X and gamma energy range: 15 keV to 7 MeV; Energy response better than ±20% (typically ±10%) from 16 keV to 7MeV
- **Accuracy Hp(10):** ≤ ±10% *(^{137}Cs, ~24 mSv/h); ≤ ± 15%*, (^{241}Am, ~23 mSv/h); ≤ ± 19%**X-ray 16 keV*(*including ± 5% extended uncertainty k=2); (** including ±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 µSv/h to 10 Sv/h (1 mRem/h to 1000 Rem/h) or 1 µSv/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 µSv/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**: < ± 20% up to 10 Sv/h (1000 Rem/h) (Co and X H30 20 keV)
    < ± 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" L x 2.2" W x .08" D 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

Radiopharmaceutical Tec-Control Chromatography System

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.%	150-130
Diphosphonate	Acetone (HPLC Grade), Distilled H2O	150-001 & 150-005
Disofenin (Hepatolite™)	150-160, Distilled H2O	150-122 & 150-125
DMSA	Acetone (HPLC Grade),	150-025
DTPA	Acetone (HPLC Grade), Distilled H2O	150-001 & 150-005
Exametazine (Ceretec™)	Ethyl Acetate 99.%	150-130
Fluorodeoxyglucose (FDG)	Acetone (HPLC Grade)	150-127
Glucoheptonate	Acetone (HPLC Grade), Distilled H2O	150-001 & 150-005
HDP	Acetone (HPLC Grade), Distilled H2O	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 H2O	150-001 & 150-005
Mebrofenin (Cholotec™)	150-160, Distilled H2O	150-122 & 150-125
Pyrophosphate	Acetone (HPLC Grade), Distilled H2O	150-001 & 150-005
Sestamibi (Cardiolite™ and Miraluma™)	Ethyl Acetate 99.%	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.%	150-971
In-111 Octreotide (Octreoscan™)	150-773 & 0.9% Saline	150-771 **
In-111 Monoclonal Antibodies	150-773 & 0.9% Saline	150-771 **
I-131 Monoclonal Antibodies and Neutrospec™	0.9% Saline	150-771
*See Sigma-Aldrich product matrix for solvents		

* 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

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
150-126	Brown Strips, 50/pkg
150-127	Green Strips, 50/pkg
150-130	Gold Strips, 50/pkg
150-771	Dark Green Strips, 50/pkg
150-782	Aluminum 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

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

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

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

Aluminum Breakthru Kit

150-780   Aluminum Breakthru Kit
Includes: Aluminum Standard, 5 ml, 10 µg/ml, 50 indicator strips and manual

150-785   Aluminum Breakthru Kit
Includes: Aluminum Standard, 5 ml, 5 µg/ml, 50 indicator strips and manual

CAP-TLC

The CAP-TLC Scanner is an automated quality assurance tool to rapidly and accurately perform strip QC for any SPECT radiopharmaceutical kit. Dual detector design assures a wide activity range for kits reconstituted any time of the day. The scanner has an optional feeder attachment which holds up to 30 samples. Short scan times assure rapid processing.

The system is compatible with most nuclear pharmacy management systems. Report includes activity distribution graph and Pass/Fail results based on user defined acceptance limits. Automated transfer of data eliminates manual record keeping.

SPECIFICATIONS:

Minimum Computer Requirements
- Minimum Display Resolution: 1280 x 720 (720 p)
- CPU: x64 processor, 2 GHz or faster
- Operating System: Windows 10
- Minimum Memory: 4 GB
- Minimum Hard Drive: 40 GB
- Microsoft Office or LibreOffice

Console Dimensions (H x W x L)
- 6.7 x 8.1 x 9.6 in. (168 x 206 x 245 mm) 21.6 lb (9.8 kg)

Feeder Dimensions (Optional) (H x W x L)
- 9.9 x 5.1 x 12.1 in.(251 x 130 x 308 mm)9.0 lb (4.1 kg)

Tray Dimensions (Optional) (H x W x L)
- 11.75 x 8.25 x 1.5 in. (292 x 209 x 38 mm)

Working Environment
- 0 to 60 °C, 0 to 90% humidity, non-condensing

Power Requirements
- 110-240 V ac 50/60 Hz 50 W

FEATURES:

Software
- Windows 10 based application software
- Multiple password security levels
- Manual or bar code assisted job creation
- Daily QC test module
- User definable scan protocols
- Define scan by total counts or time
- Automatically rescans to achieve total counts
- User definable Pass/Fail limits
- Failed results printed in RED
- Includes one strip and two strip protocols
- Supports two or three user defined cut points
- Automatic background subtract
- Excel Report format for easy export
- PC Communication Protocol
- Compatible with most printers

Hardware
- Two collimated GM detectors
- Scanning range 4 µCi – 2 mCi
- Scan times typically 1-2 minutes
- Single axis step motor
- Adjustable step points
- Includes QC cartridge
- Custom strip holder cartridge
- Maximum strip length 11.5 cm
- Maximum strip width 2 cm
- Hinged cover provides easy access for cleaning
- USB interface

CAP-TLC Scanner	Automated TLC Strip QC Scanner
Includes:	Console, 1QC Cartridge, and 3 Strip Cartridges

Accessories:

CAP-BCR	Bar Code Reader
CAP-MCF	Multi Cartridge Feeder
CAP-CT	Collection Tray
0975-0137	Co-57 100 uCi Spot Marker
CAP-CART	Cartridges, Set of 10

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

Plastic Warning Signs

CAUTION
RADIATION AREA
10" x 7"
024-900

CAUTION
X-RAY CAUTION
10" x 7"
024-923

CAUTION
RADIOACTIVE MATERIALS
10" x 7"
024-999

CAUTION
RADIATION AREA RADIOACTIVE MATERIALS AUTHORIZED PERSONNEL ONLY
14" x 10"
024-914

PERSONNEL RADIATION MONITORS REQUIRED BEYOND THIS POINT
14" x 10"
024-957

CAUTION
IF YOU ARE **PREGNANT** OR THINK YOU MIGHT BE YOU MUST INFORM THE TECHNOLOGIST
14" x 10"
024-910

PRECAUCION
SI USTED ESTA **ENCINTA** O PIENSA QUE PUEDA ESTAR LE DEBE INFORMAR A EL TECNÓLOGO
14" x 10"
024-911

CAUTION
If you are pregnant or breastfeeding, or think you may be pregnant, please inform the technologist before you begin your test.
14" x 10"
024-916

Cardboard Warning Signs

Black on Yellow

CAUTION
RADIOACTIVE MATERIALS
PATIENT
RADIOISOTOPE   AMOUNT   DATE
IF AN EMERGENCY CALL
8" x 10", 10/pkg
025-001

CAUTION
RADIOACTIVE MATERIALS
8" x 10", 10/pkg
025-002

CAUTION
HIGH RADIATION AREA
8" x 10", 10/pkg
025-003

CAUTION
RADIATION AREA
8" x 10", 10/pkg
025-004

CAUTION
If you are PREGNANT, think you may be PREGNANT, or if you are BREASTFEEDING, you must inform the technologist before your treatment or study begins
024-PBFE

AVISO
Si usted esta EMBARAZADA, o piensa que puede estar EMBARAZADA, o si usted esta AMAMANTANDO, usted tiene que informarle al tecnico antes de comenzar su studio.
024-PBFS

8" x 10", 4/pkg
024-PBFE English
024-PBFS Spanish

Perforated Warning Tapes

Pressure Sensitive adhesive plastic tape

RADIOACTIVE MATERIAL
026-013

CAUTION RADIOACTIVE MATERIALS
ISOTOPE AMOUNT DATE
026-012

CAUTION RADIOACTIVE MATERIALS
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
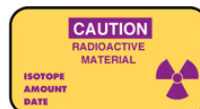
026-014

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

Radioactive
Warning Labels
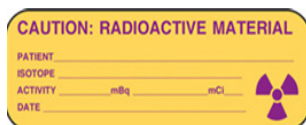
026-106

026-108

026-109

026-106   Caution Radioactive Material
           3" W x .875" H, 320 labels per roll
026-108   Radioactive Waste Label
           2" W x 3" H, 320 labels per roll
026-109   Radioactive Waste Label
           4" W x 2.63" H, 240 labels per roll

Pre-Strung Tags

- Extra strength cardboard
- Reinforced string hole
- Package of 100
- 2.63" W x 5.25" H
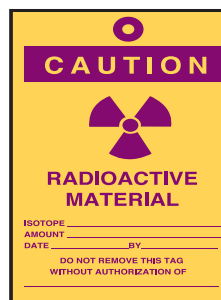
029-001   Pre-Strung Container Tags, 100/pkg

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

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

214-728   High Handle Foot Stool, 1 step
                   350lb Weight Capacity

214-729G High Handle Foot Stool, 2 step
                   500lb Weight Capacity

Plastic Utility Cart

- Ergonomically designed handle
- 2 deep-pocket shelves for easy and secure loads
- 5" thermoplastic casters (2 fixed, 2 swivel)
- 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

240-500   Plastic Utility Cart

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

128-160   Eclipse Probe Cover, 100/bx

Heavy Duty Transport Cart

- Constructed of 1/8" stainless steel
- Easily moved and secured in place with 2 fixed and 2 swivel locking 4" casters
- Lockable push handle
- 3 fixed shelves

Specifications:
Dimensions: 20" W x 30" L x 36" H
Weight capacity: 400 lb per shelf
Shipping weight: 185 lb

PTI-HDTC   **Heavy Duty Transport Cart**

Gas Lift Lab Stool

Comfortable · Adjustable · Solid Construction

- Backrest & footring included (footring not shown)
- Adjustable seat height
- 5 star wheel base
- 2" casters
- Weight capacity: 250 lb

214-115   Gas Lift Lab Stool
214-115-WB   Gas Lift Lab Stool Without Back

Tall Gas Lift Lab Stool

Comfortable · Adjustable · Solid Construction

- Backrest & footring included
- Adjustable seat height
- 5 star wheel base
- Weight capacity: 275 lb

NMC-438   Tall Gas Lift Lab Stool

IV Stand
2 or 4 Hook, 5 Leg

- Adjustable from 52 1/2" to 93 1/2"
- 24" Diameter polished die cast aluminum base
- Tru-Loc© friction knob
- 2 1/2" twin wheel hooded casters
- 5 leg base

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 locking knob
- 2" twin wheel hooded casters
- 4 leg base

214-403   IV Stand, 2 hook, 4 leg

Mayo/Instrument Stand
Stainless Steel Tray

- Stainless Steel Tray 12 5/8" L x 19 1/8" W
- Tru-Loc© friction locking knob
- 2" single wheel casters
- Adjustable height: 37 1/4" to 64"

1520   Mayo/Instrument Stand

Wrap-Around Apron

- Designed for front & back protection
- Features extra wide shoulders, distributing weight over a greater area to reduce fatigue
- Nylon fabric
- 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"
- Includes: TL Lite Ply 20% lighter than regular lead

103-336   Wrap-Around Apron, Unisex

Standard Coat Apron

Nylon fabric
Features open back with choice of closure
3 Closure Options: Quick Release Buckle,
                Hook & Loop, 1" Tie Straps
Shoulder pads included
Standard Protection: 0.5 mm Pb Equiv.
Chest Size: 42" - 46"
Front Length: 36"
Includes: TL Lite Ply
20% lighter than regular lead

PTI-701   Standard Coat Apron, Unisex

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
- Includes: TL Lite Ply 20% lighter than regular lead

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"

Half Aprons

- Nylon fabric
- Designed for front or back protection
- 3 Closure Options: Quick Release Buckle,
- Hook & Loop, 1" Tie Straps
- Standard Protection: 0.5 mm Pb Equiv.
- Available in Child and Adult sizes
- Includes: TL Lite Ply 20% lighter than regular lead

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

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

- Nylon fabric
- Soft and flexible while offering the best of comfort without binding
- Rear hook & loop closure
- Standard Protection: 0.5 mm Pb Equiv.
- Includes TL Lite Ply

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.
Includes: TL Lite Ply
20% lighter than regular lead
Set of 3 includes one of each:
3" L x 5" W, 6" L x 7" W, 7" L x 9" W

Not available in red
Actual Color: Royal Blue

Features four attachable gonad
shields in assorted sizes that
interchange to one hook
and loop belt.
Includes: TL Lite Ply
20% lighter than regular lead
Set of 4 includes one of each:
6" x 7", 7" x 9" and two 3" x 5"

PTI-GS   Gonadal Shields

PTI-GOSS   Gonadal Ovarian Belt System

Peg Apron Rack

- Powder coated steel
- Holds 1-4 Aprons
- 24" L x 4" W
- Weight 3 lb

Model 813   Peg Apron Rack
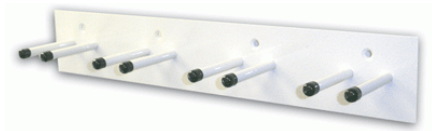
Porta-Rak

- Holds up to 8 aprons
- Designed for where space
  is at a premium
- Sturdy aluminum five leg base
- 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 Fexibility, 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

Wrap Around

- Features comfortable molded wrap
  styling in durable tortoise nylon frame
- Uni-fit bridge with leaded side shields
- 0.75 mm Pb Equiv. Optical Lead Glass
- Color: Tortoise

Model 53   Non prescription

Ultra Flex

- Advanced nylon composite frame
- Uni-fit ear and nose pieces
- 0.75 mm Pb Equiv. Optical Lead Glass
- Side shields included
- Color: Silver

Model 98UFS   Non prescription

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

LTI047   LTI046   LTI030

LTI051

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

LTI046   Bind-It Decontaminant Hand Soap -   16 oz bottles, Case of 12
LTI047   Bind-It Decontaminant Hand Soap - 32 oz bottles, Case of 12

6-11
1-5

LTI030   Bind-It Decontaminant Spray Cleaner - 32 oz bottles, Case of 12

6-11
1-5

LTI031   Decontaminant Wipes, 50/Package

Patient Care Packs allow patients to safely and effectively minimize and remove contamination from their isolation areas.

- The 16oz 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	Patient Care Pack	
	Includes:	1 Bottle of 16 oz S4FE-D CRBN Decon Soap
		1 Bottle of 32 oz S4FE-D CRBN Decon Spray
		1 Bottle of 16 oz S4FE-D CRBN Decon Concentrate
		1 Bag of S4FE-D CRBN Decon Wipes

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
- Niptongs 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

033-304	Absorbent Paper Roll
	2 Rolls -300' L x 20" W
033-013	Absorbent Sheets, 50/bx
	13" W x 17" L

CP-1717	Collimeter Protectors 17" x 17" Perforated, 600ft
CP-1717D	Dispenser for collimeter protectors

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

Syringe Covers

- Avoid a lengthy cleaning process of dose calibrator and dipper
- Designed to assist in compliance to USP Chapter 825 guidelines
- Fits up to one 10cc Syringe

SC-100   Syringe Covers (100 per package)

Sterile 70% USP Isopropyl Alcohol

- 16 oz spray bottle

- Ships continental US only

S70-16   Sterile 70% USP Isopropyl Alcohol, Spray Bottle

Syringe Cover Container

- Easy access container to keep your syringe covers from being misplaced

- Fits up to one package of SC-100 Syringe Covers (100 per package)

SC-101   Syringe Cover Container

Humidity and Temperature Indicator

- Precalibrated to NIST-Traceable standards
- Displays Humidity levels, Temperature, and Time
- Reads in Farenheit and Celsius

HTI   Humidity and Temperature Indicator

USP 825 requires technologists to clean their dose calibrator well insert and dipper when used for measuring radiolabeled blood products or residual activity post administration.

Our new disposable syringe cover with integrated seal (Model SC-100) will keep you compliant! Simply place the syringe inside a disposable syringe cover, seal it, spray the exterior with sterile 70% USP isopropyl alcohol (Model S70-16), and proceed with the assay. It's that easy, the cleaned sealed cover keeps the assaying of your syringes USP 825 compliant.

825 Starter Pack

Be prepared for USP Chapter 825 with all of the above products!

- Two packages model SC-100 Syringe Covers (100 per package)

- Model SC-101 Syringe Cover Container

- Model S70-16 Sterile 70% Isopropyl Alcohol Spray, 16 oz

SC-102   825 Product Starter Pack

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

ISO Class 3-5 Absorbent Sheets

PTI-MSL is a highly absorbent ultrasonically sealed, cleanroom laundered wipe recommended for critical environments rated ISO Class 3 and above. With two-ply, 100% continuous filament polyester knit fabric, the wipe is ultrasonically bonded together. World class fiber and particle performance make it suitable for the most critical spill control and cleanroom cleaning applications.

- Lightweight, high absorbency material design
- Designed for use in ISO Class 3 and higher environments
- Excellent for spill control in processing areas

12" x 12" Sheets

PTI-MSL	ISO Class 3-5 Absorbent Sheets, 50 per package

ISO Class 5-8 Absorbent Sheets

PTI-VCP is a rayon / polyester nonwoven wipe recommended for ISO Class 5 and above environments. ISO Class 5-8 absorbent sheets offer exceptional absorbency, durability and cleanliness. Due to 50% rayon content, it has best-in-class absorbency, reducing the actual wipe usage in spill removal applications. Its soft hand and low fiber shedding performance make it a great option in critical cleaning applications.

- High absorbency compared to typical cellulose / polyester
- Designed for use in ISO Class 5 and higher environments
- Excellent for use in component prep, compounding, and wash areas

12" x 12" Sheets

PTI-VCP	ISO Class 5-8 Absorbent Sheets, 150 per package

Vial Covers

- Avoid a lengthy cleaning process of dose calibrator and dipper
- Designed to assist in compliance to USP Chapter 825 guidelines

VC-50	Vial Covers (50 per package)

Decontamination Kit

- 1- 14 Gal Open Head Poly Drum W/Plastic Leverlock Closure. Un/Dot Rating: 1h2/X65/S 1h2/Y100/S, Yellow
- 2- Tyvek Disposable Coverall with Hood
- 2- Pairs, Pvc Booties, Yellow, 6 Mil
- 2- Half Mask Respirator, 5500 Series, Equiped with 7580p100 Filters
- 2- Pairs, Latex Gloves
- 1- Decon Hand And Instrument Cleaner
- 5- Polyethylene Printed Bags, 18"X 24", .004 Mil. Yellow with Magenta Lettering, "Caution Radioactive Material"
- 1- Roll Yellow Tape with Magenta Lettering, "Radioactive Materia;" With Trefoil
- 1- Sponge Mop, Pail, Dustpan and Brush
- 2- Yellow Warning Signs eith Magenta Lettering, "Caution Contaminated Area"
- 1- Rad Rope, 3/16"X50', Yellow/Magenta
- 1- Pack Of 50 Sampling Swipes
- 1- 12" Disposable Plastic Niptongs

0601-0019   Decontamination Kit
            Shipping Weight: 40 lb

Minor Emergency Spill Kit

- 6pr   Disposable Gloves
- 1 pr   Housekeeping Gloves
- 2 ea   Disposable Lab Coats
- 2 ea   Paper Hats
- 2 prs   Disposable Shoe Covers
- 1 Roll   Absorbet Paper with Plastic Backing
- 6 ea   Yellow Plastic Bag Liners with Twist Ties
- 1 Roll   Tape "Caution Radioactive"
- 1 ea   Pencil
- 1 ea   Black Pen
- 3 ea   Pre-Strung Tags "Caution Radioactive Material"
- 10 ea   Supplies for Contamination Smears Samples
- 1 ea   Clear Clip Board
- 1 ea   Instructions for "Emergency Procedures"
- 1 ea   32 oz. bottle Bind-It™ Decontaminant Hand Soap
- 1 ea   32 oz. bottle Bind-It™ Decontaminant Spray Cleaner

MESK   Minor Emergency Spill Kit
            *Shipping Weight: 7 lb   *Specs are Subject to change**

Preparation Mats

- Latex-free, no additional exposure to latex to help reduce possiblity of latex allergies
- Non-linting and highly absorbent
- Provides additional safety when compounding
- Economical method to help control spilled fluids and non-linting design helps limit particulates in laminar flow hoods and barrier isolators
- 250 Mats per package
- 16" x 22"

PTI-PM1622   Prep Mat 16" x 22"

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.

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"

Weight: 18 lb

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. The phantom's cylinder and carrier have scribelines for accurate alignment. A flat surface on the cylinder allows either vertical or horizontal positioning.

Proposed by the International Atomic Energy Agency (I.A.E.A.) and the American National Standards Institute

Outer Dimensions: 5" H x 5" Diameter
Inner Dimensions: 4" H x 2" Diameter

5230-0038   Thyroid Uptake Neck Phantom

Bar Phantoms
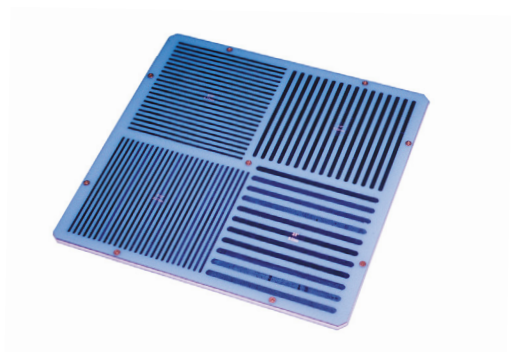
Four-quadrant bar phantoms offer precise determination of camera intrinsic resolution, collimator spatial resolution, field size and linearity.

Rectangular Bar Phantom

Dimensions: 21" L x 16" W 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

243-935   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" W 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

243-987   Symbia and E-CAM Bar Phantom

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

Bar Phantom

The PTI-820L Bar Phantom is ideal for daily/weekly QA checks of scintillation camera performance. Can be used to measure intrinsic and collimator spatial resolution and spatial linearity, confirming the gamma camera's overall ability to identify and properly display small anatomic objects.

Specifications:
Dimensions: 27" x 19" x 0.5"
Cerrobend Bar Widths: .1", .125", .187", .25"
                              (2.54, 3.18, 4.76 and 6.35 mm)
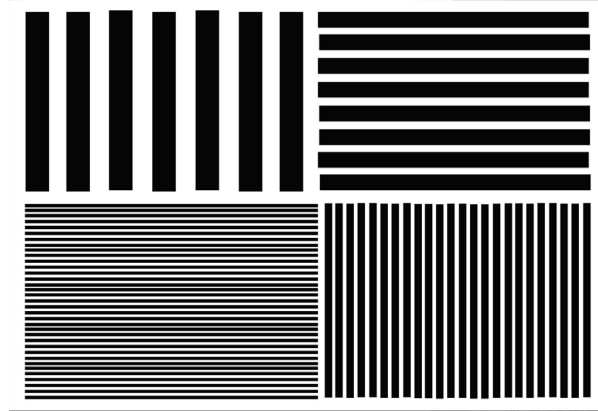
PTI-820L   Large Bar Phantom

Pro-NM Slit Phantom

The Pro-NM Slit Phantom is used for the elvaluation of Intrinsic Spatial Resolution (Quantitative Technique) according to NEMA Standards Publication NU-1-2012.

Specifications:
Dimensions: 620 x 520 x 15 mm
Lead Size: 600 x 500 x 3 mm
Parallel 1 mm thick slits with 30 mm spacing
Cover made of PMMA
Uniform PMMA part of the phantom

PTI-302   Pro-NM Slit Phantom

Quad Gamma Test Pattern Phantom

The PTI-890 Quad Gamma Test Pattern Phantom consists of four frequencies of parallel-line equally spaced bars arranged in an L-Shaped configuration in each of its quadrants. This type of bar configuration allows the user to measure spatial resolution and spatial linearity in all four quadrants of a gamma camera with one image.

There is no need to turn the phantom and take multiple images to ensure that each camera quadrant is tested with each bar width.

Specifications:
Diminsions: 20" x 20"
Cerrobend Bar Widths: 1", .16", .19", .25"
                             (2.54, 4.06, 4.8 and 6.35 mm)
Weight 24 lb
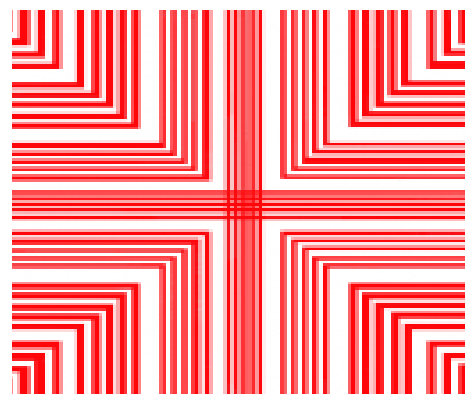
PTI-890   Quad Test Pattern Phantom

8"
23"
41 1/4"
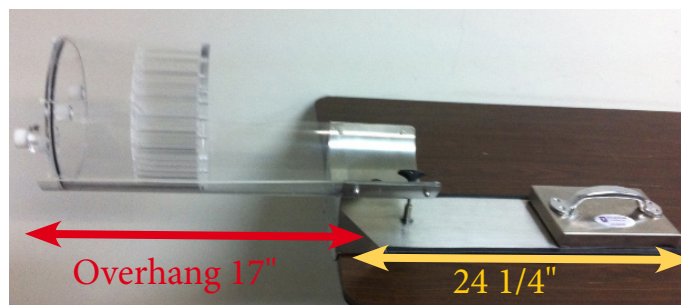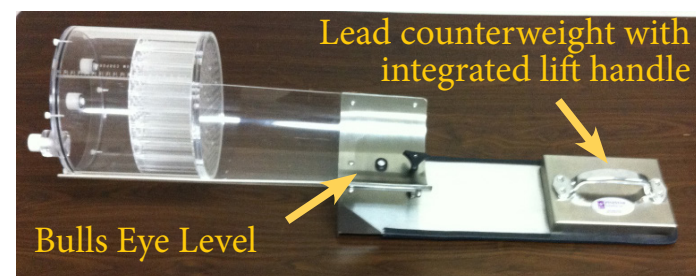
QC Phantom Holder

- Durable stainless steel construction

- Adjustable phantom support platform with bulls eye level ensure fast easy leveling

Lead counterweight with integrated lift handle

Bulls Eye Level

- 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

Overhang 17"
24 1/4"

- 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
Crate Fee

Jaszczak Flangeless Deluxe SPECT Phantom™
Esser Flangeless Deluxe PET Phantom™

043-765   043-772 Designed for PET   2nd Deluxe Flangeless Lid

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: 6.4 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

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: 8, 12, 16, 25 (x3) mm
Solid cylinder (Teflon®): 25 mm
Cylinder height: 1.5"
Lid Closure: Bayonet-Style with Lock Screw

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: 4.8, 6.4, 7.9, 9.5, 11.1, 12.7 mm
Height of Spheres from Base Plate: 3.1" H
Solid Sphere Dia: 6.4, 9.5, 12.7, 15.9, 19.1, 25.4 mm
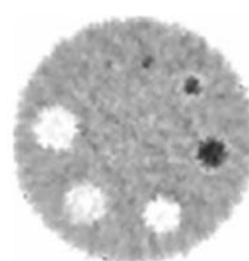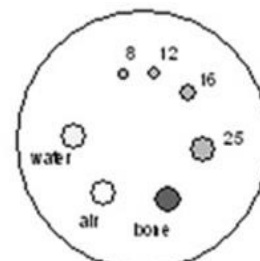
Pet Phantom Lid   /   Pet Phantom Lid
Image   Diagram

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, witHh 2nd Deluxe Flangeless Lid for SPECT, ACR
043-777	Cardiac Phantom Insert (See Page 147)
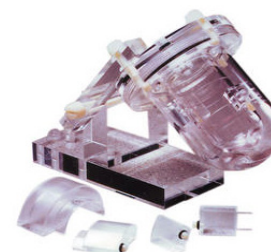
043-777

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: 7 cm
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.

Specifications:
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 Length: 180 mm

        043-767   NEMA IEC PET Body Phantom Set
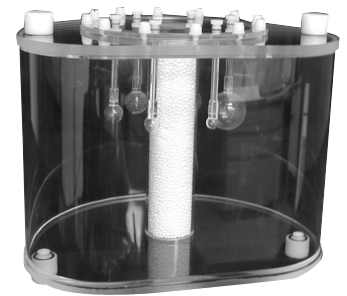
NEMA PET Scatter Phantom™

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 and offset a distance of O.D. 4.5 cm.

Specifications:
Outside Diameter: 203 cm
Length: 70 cm
Cylinder Hole Size: 6.4 mm
Cylinder Hole Offset: 4.5 cm
Line Source Dims:
Length: 80 cm
I.D.:   3.2 mm O.D.: 5 mm

        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 (Fillable Polyethylene Tubing)
            Inside Dia: 1 mm   Outside Dia: 3 mm

        043-769   NEMA 2007 PET Sensitivity Phantom

Anthropomorphic Torso Phantom™

- Includes large, body-shaped cylinder lung, liver and spine inserts
- Lung inserts can be filled with Styrofoam® beads and water to simulate lung and tissue density
- Optional Cardiac Insert available (043-777)
- Simulates upper torso of average to large male/female patients (38 x 26 cm)
- Simulates anatomical structures and radioactivity distributions
- Optional Fillable Spine Insert available

Specifications:
Lateral outside dimension:	38 cm
Lateral inside dimension:	36 cm
Anterior-posterior outside dimension:	26 cm
Anterior-posterior inside dimension:	24 cm
Wall thickness:	9.5 mm

Volumes:
Left lung (w/o Styrofoam® beads):	~ 0.9 liter
Right lung (w/o Styrofoam® beads):	~ 1.1 liter
Left lung (w/ Styrofoam® beads):	~ 0.36 liter
Right lung (w/ Styrofoam® beads):	~ 0.44 liter
Liver:	~ 1.2 liter
Background:	~ 10.3 liter
Cylinder with lung-spine insert:	~ 7.4 liter

043-795   Anthropomorphic Torso Phantom

Elliptical Lung-Spine Body Phantom™
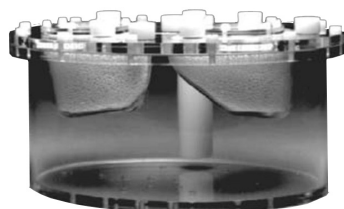
- Includes spine and fillable lung inserts
- Lung inserts can be filled with Styrofoam® beads and water to simulate lung tissue density
- Optional Cardiac Insert available (043-777)
- Simulates anatomical structures and radioactivity distributions in upper torso of human
- Optional body contour rings may be purchased separately

Specifications:
All clear material: PMMA
Cylinder inside diameter: 21.6 cm
Cylinder inside diameter along major axis: 30.5 cm
Cylinder inside diameter along minor axis: 22.1 cm
Cylinder inside height: 18.6 cm
Cylinder wall thickness: 6.4 mm

Volumes:
Empty cylinder:	~ 9.5 liters
Left lung (w/o Styrofoam® beads):	~ 0.9 liter
Right lung (w/o Styrofoam® beads):	~ 1.1 liter
Left lung (w/ Styrofoam® beads):	~ 0.36 liter
Right lung (w/ Styrofoam® beads):	~ 0.44 liter
Volume of cylinder with Lungs:	~ 7.4 liter

043-740   Elliptical Lung-Spine BodyPhantom

Cardiac Phantom Insert™

- Designed to be used with the various Data Spectrum circular and elliptical cylinders, Elliptical Lung-Spine Body Phantom™ and the Anthropomorphic Torso Phantom™
- Simulates normal and abnormal myocardial uptake and radioactivity in left ventricular chamber
- Solid inserts simulate transmural and non-transmural cold abnormalities
- Fillable inserts can be used to simulate transmural and non-transmural cold or hot abnormalities

Specifications:
Cardiac Insert
"Ventricle" overall length:	9.3 cm
"Ventricle" overall diameter:	6.1 cm
"Myocardium" thickness:	1.0 cm
"Myocardium" volume:	~ 110 ml
"Ventricle" volume:	~ 60 ml

Solid Defect Set
1. 60° x 2 cm
2. 45° x 1.5 cm
3. 60° x 2 cm, with 5 mm wall thickness (non-transmural defect)

Fillable Defect Set
1. 180° x 2 cm.. ~ 13 ml
2. 90° x 2 cm ....~ 5.4 ml
3. 45° x 2 cm .... ~3.8 ml
4. 45° x 2 cm, with 5 mm thick chamber*......................~ 1.4 ml

043-777   Cardiac Phantom Insert

Hoffman 3-D Brain Phantom™

- Anatomically accurate simulation of radioactivite distribution for brain SPECT and brain PET studies and distribution of proton density and relaxation parameters for brain MRI studies
- Simulates 4:1 uptake ratio (by partial volume effect) seen for normal gray and white matter in flow and metabolic studies
- Single fillable chamber eliminates the necessity of preparing different concentrations of radioactivity
- Fillable and solid defects for basil ganglia region available

Specifications:	
Cylinder inside diameter:	20.8 cm
Cylinder inside height:	17.5 cm
Fillable volume:	~ 1.2 liter

043-790   Hoffman 3-D Brain Phantom

NEMA 94 PET Phantom

The NEMA 94 PET Phantom consists of 1 large outer cylinder, 2 smaller fillable cylinders, 1 solid PTFE cylinder, and 3 stainless steel line sources. According to the standard, they can be used in various configurations to measure spatial resolution, scatter, sensitivity, count losses and randoms, uniformity, scatter correction, count rate correction, and attenuation correction.

- All clear material: PMMA
- Cylinder outside height with lid: 229 mm
- Cylinder outside height without lid: 216 mm
- Cylinder outside diameter: 203 mm
- Cylinder inside: diameter: 197 mm
- Wall thickness: 3 mm
- Teflon® Insert diameter: 51 mm

- Fillable Insert outside height: ~ 203 mm
- Fillable Insert inside height: ~ 185 mm
- Fillable Insert outside diameter: ~ 51 mm
- Fillable Insert Inside diameter: ~ 45 mm
- Line Source diameter: ~ 1 mm
- Line Source height: ~ 184 mm

043-755   NEMA 94 PET Phantom

NEMA SPECT Triple Line Source Phantom

- The NEMA SPECT Triple Line Source Phantom is designed in accordance with the recommendations by the National Electrical Manufacturers Association (NEMA) to standardize the measurement of reconstructed spatial resolution of SPECT
- Acceptance testing with NEMA standard
- Center-of-rotation error evaluation
- Evaluation of changes of radius-of-rotation on spatial resolution
- Quantitative evaluation of reconstruction filters and scatter compensation methods

Specifications:	
Clear material is PMMA	
Cylinder Outside Diameter:	222 mm
Cylinder Inside Diameter:	202 mm
Cylinder Outside Height:	238 mm
Cylinder Inside Height:	200 mm
Diameter of Line Sources:	1 mm
Spacing of Line Sources:	75 mm
Useful Height of Line Sources:	184 mm

043-758   NEMA SPECT Triple Line Source Phantom

Triple Line Insert™

- Designed for use with nearly all of the cylinders supplied with Data Spectrum phantoms
- Center-of Rotation error evaluation
- Evaluation of changes of radius-of rotation on spatial resolution
- Spatial Resolution measurement in air and in water if mounted in cylinder
- Quantitative evaluation of reconstruction filters and scatter compensation method

Specifications:	
Diameter of insert:	18.6 cm
Diameter of line sources:	~ 1 mm
Spacing of line sources:	7.5 cm
Useful height of line sources:	7 cm

043-730   Triple Line Insert

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

Hollow Sphere Set (6)™

- Designed for use in all circular and elliptical ECT cylinders
- Simulates hot or 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.

Specifications:
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.

Specifications:
Outer Diameter: ~5.94, ~6.95, ~8.23, ~9.86 mm
Volume of Spheres: ~31, ~63, ~125, ~250 ul

043-764   Micro Hollow Spheres Phantom Insert

Hot Spot Insert™
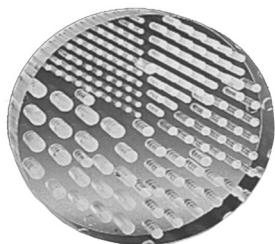
- For use with high spatial resolution SPECT and PET Systems
- System resolution test for high contrast structures
- Acceptance testing
- Routine quality, assurance and control
- System performance evaluation

Specifications:
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 ™
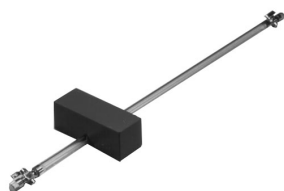
- Center-of-rotation(COR) error measurement for systems that have axially dependent COR correction
- Evaluation of changes of radius-of-rotation on spatial resolution
- Planar and SPECT spatial resolution measurements in air
- Quantitative evaluation of reconstruction filters

Specifications:
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

ProKem™ TECHNOLOGY

C-Thru™
Eckert & Ziegler

ASK FOR THE
ORIGINAL
LIGHTWEIGHT
SOURCE

FeatherLite™
Eckert & Ziegler

Perflexion
Eckert & Ziegler

PET/Spect Sources

Accessory Sources

Rod Sources

Vials

Reference

Line Sources

Auto QC

Spot Markers
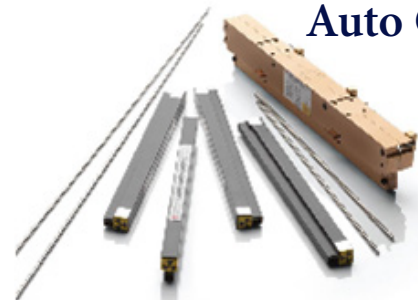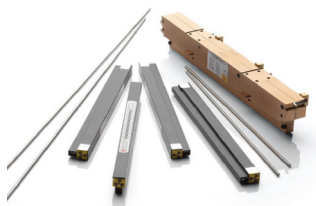
Sources for SPECT

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	NES-8429-SET NES-8429-SET	Gd-153 Gd-153	450 mCi 450 mCi	Set/ 2 Set/ 2	1 1	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	C0-57	12 mCi	Each	1	1 year

Ge-68 Phantom for GE Discovery IQ

CE Mark 1: Ge-68, 1.49 mCi (55 mBq), PET Annulus DQA Imaging Phantom
For the following systems:

- Discovery IQ 2 Ring Scanner / 10 cm PET/CT
- Discovery IQ 3 Ring Scanner / 15 cm PET/CT
- Discovery IQ 4 Ring Scanner / 20 cm PET/CT
- Discovery IQ 5 Ring Scanner / 25 cm PET/CT
- Discovery MI PET/CT
- Discovery MI DR (Digital Ready)

EG-0320   Ge-68 Phantom for GE Discovery IQ 1.49 mCi

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	1 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
	Discovery IQ	EG-0320	Ge-68	1.49 mCi	Each	1	1 year
Philips Healthcare	CPET	GF-0227	Na-22	100 µCi	Each	1	2 years
	Allegro	HEG-0111	Cs-137	20 mCi	Each	1	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 TF/2XL	HEGL-0136 MMS05-022-10U	Na-22 Na-22	100 µCi 10 µCi	Each Each	1 6	2 years 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

Camera Manufacturer	Camera Model	Item#	Nuclide	Nominal Activity	Sold As	System Requires	Recommended Replacement
Naviscan	Solo II	FL08R-068-30U (8.66" L x 3.94" W x .5")	Ge-68	30 µCi	Each	1	1 year

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≤ 1.0% INU ≤ 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 151 & 152 for more information

Model#	Active Dimensions	Activity
*For Millenium MPR, VG & MG, GE Hawkeye, Infinia, Myosite, Philips Argus, Forte, Skylight, Symbia & Siemens E-Cam, Optima NM/CT 640		
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 Only - Lead Lined Case on Wheels		
*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 Only - Lead Lined Case on Wheels		
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
C0000868	Lead Lined Case	
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
C0000868	Lead Lined Case	
*For Digirad Ergo		
MED-3745-10-NC	16.6" X 13.2" rectangle	10 mCi
ProKase Only - Lead Lined Case on Wheels		
*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 Only - Lead Lined Case on Wheels		
For GE Discovery GE530c, NM/CT570		
MED-3743-20-NC	10" X 10" square	20 mCi
C0000868	Lead Lined Case	

Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only

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
- Light 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

ProKem™ TECHNOLOGY = f Proprietary Chemistry $\left[\left(\begin{array}{c} \text{Unique} \\ \text{Purification} + \\ \text{Process} \end{array} \begin{array}{c} \text{Patented} \\ \text{Production} \\ \text{Processes} \end{array} \right) \propto \text{Cleaner Co-57} \propto \begin{array}{c} \text{More} \\ \text{Uniform} \\ \text{Source} \end{array} = \begin{array}{c} \text{Better} \\ \text{Quality} \\ \text{Control} \end{array} \right]$
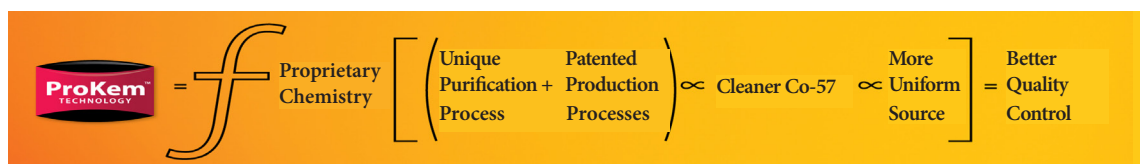
Model#	Active Dimensions	Activity
Co-57 Flood Source for GVI Clear Vision		
PF09R-057-10M-NC	9" X 9" square	10 mCi
Co-57 Flood Source for CardioMD, Siemens C-Cam, GE Ventri & GE Optima		
PF16R-057-5M-NC	10.5" X 16" rectangle	5 mCi
PF16R-057-7.5M-NC	10.5" X 16" rectangle	7.5 mCi
PF16R-057-10M-NC	10.5" 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

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

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 153 & 154 for more information

ProKem TECHNOLOGY $= f$ Proprietary Chemistry $\left[\begin{array}{c} \text{Unique Purification +} \\ \text{Process} \end{array} \begin{array}{c} \text{Patented Production} \\ \text{Processes} \end{array} \right] \propto$ Cleaner Co-57 $\propto \begin{array}{c} \text{More Uniform Source} \end{array} = \begin{array}{c} \text{Better Quality Control} \end{array}$
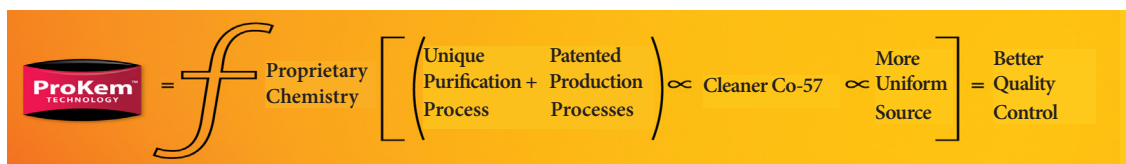
Model#	Active Dimensions	Activity
For Digirad Cardius, Dilon & GVI Clear Vision		
CTRF-10012-NC	8.9" X 8.9" square	10 mCi
For CardioCam, CardioSpect D90, NeuroSpect Quad		
CTRF-13770A-NC	15.2" X 9.1" rectangle	10 mCi
***For CardioMD, Siemens C-Cam, GE Ventri & GE Optima**		
CTRF-10017-NC	10" X 16" rectangle	10 mCi
CTRF-10018-NC	10" X 16" rectangle	15 mCi
CTRF-10019-NC	10" X 16" rectangle	20 mCi
ProKase Only - Lead Lined Case on Wheels		
***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 Only - Lead Lined Case on Wheels		
***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
ProKase Only - Lead Lined Case on Wheels		

Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only

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Pb Shipper Available For
All Featherlite™ And C-Thru™ Flood Sources

Save time and money with our "hassle-free" Pb Shipper.

With a lead-lined sleeve covering all 6 sides, our Pb Shipper is designed to qualify as an UN2910 "Excepted Package" when the surface reading for your Co-57 flood source is ≤ 0.5mRem/hr.

NO MORE UN2915
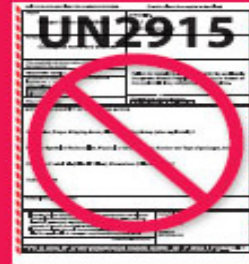
Co-57 Flood Source Shield

- A great choice for storing Small Field of View Featherlite™ and C-Thru™ flood sources

- Smaller case (17.5" W x 18.5" H x 4.5" D) requires less storage space

Item # C0000868

ProKase™ - 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!

Auto Quality Control Sources for
SIEMENS SYMBIA CAMERA

HEGL-0133 & PHI-0124

We also have Quality Control Sources for SPECT and PET

Page 151-152

Reference/ Vial Sources

Cap

Active Element
(20 ml resin matrix)

3.19 in
(81 mm)

Capsule

1.23 in
(31.2 mm)
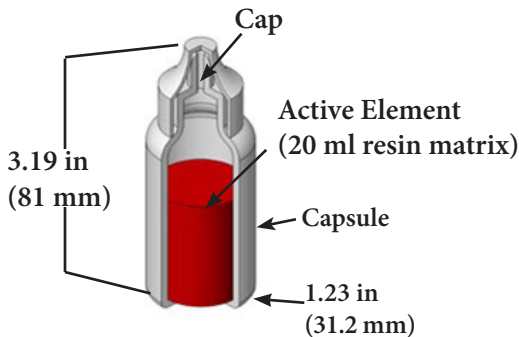
- Dose Calibrator Reference Sources provide a safe and convenient method of calibrating instruments for measuring the accuracy of imaging solutions most commonly utilized by medical technicians
- The Dose Calibrator is manufactured by uniformly distributing the active element in 20 mL of epoxy, comprising 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 ±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

Model#	Isotope	Activity
NMC-206	Cobalt-57	5 mCi
NMC-207	Cobalt-57	10 mCi
NMC-358	Barium-133	250 µCi
NMC-354	Cobalt-60	50 µCi
NMC-350	Cesium-137	200 µCi
NMC-356	Cesium-137	250 µCi

Model#	Isotope	Activity
Reference Source Sets:		
NMC-362	Source Set includes:	
	Cobalt-57	5 mCi
	Cobalt-60	50 µCi
	Cesium-137	200 µCi
NMC-367	Source Set includes:	
	Cobalt-57	5 mCi
	Cobalt-60	50 µCi
	Cesium-137	200 µCi
	Barium-133	250 µCi
NMC-369	Source Set includes:	
	Cobalt-57	5 mCi
	Cesium-137	200 µCi
	Barium-133	250 µCi

Model#	Isotope	Activity
BM06S-6805	Germanium-68	0.5 mCi
BM06S-681	Germanium-68	1 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

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 ±5% at the 99% level

Model#	Isotope	Activity
BM08-57-5	Co-57	0.1 µCi
BM08-571-5	Co-57	1.0 µCi
BM08-33-5	Ba-133	0.1 µCi
BM08-37-5	Cs-137	0.1 µCi
GF-0322	Co-57	10 µCi

063-100	Rod Source Set, 3" x 0.5" 0.1 µCi 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 µCi 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 ±15%

Model#	Isotope	Activity
67-289	Co-57	50 µCi*
NMC-8200	Co-57	100 µCi*
4121	Co-57	200 µCi*
4129	Co-57	300 µCi*
CAL-2600-100	Ge-68	100 µCi*
CAL-2600-10	Ge-68	10 µCi*
CAL-2600-1	Ge-68	1 uCi*
CAL-2600-0.1	Ge-68	0.1 µCi

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 µCi
- 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 µCi

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 ±15%
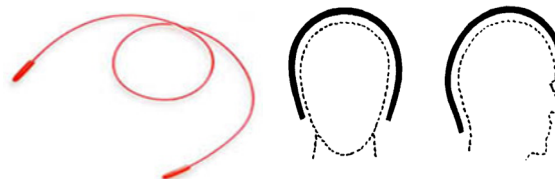
Right & Left Marker

- Consists of two 50.4 mm diameter discs containing a total amount of 100 µCi 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

BM03-57	Co-57	Total 100 µCi

BM83-10	Co-57	(150 µCi)	3 µCi/cm

Return kits are provided at No Charge for your spent source "One for One"
US and Canada Only

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 ±15%

BM83-30   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 a 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)

BM83-20 Co-57 Flexible Radioactive Ruler (460 µCi)

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 +/-15%.

Dimensions: Length-5" / Diameter-0.375"

4123   Penpoint Marker, 250 uCi
4123-200   Penpoint Marker, 200 uCi
4123-100   Penpoint Marker, 100 uCi

*We require documentation authorizing the use of Cobalt-57 in your state. Please send photocopy of the complete current license.

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 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

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

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 µCi 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.

MMS04

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, 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

163

Get your quote started today!

Visit our website to request quotes any time, any day!

Add all the items you would like a quote on, submit, and we will get your personalized quote back to you quickly!

If you would like to place an order, please send your purchase order to:

SALES3@PINESTAR.COM

FAX: 724-932-3176
Email: ptipa@pinestar.com

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