

# High Energy Syringe Shields

## Models 56-407 to 56-409



Nuclear Medicine

These syringe shields protect the user from the high energy gamma-emitting nuclides such as  $^{131}\text{I}$  (364.5 keV),  $^{18}\text{F}$ ,  $^{15}\text{O}$ , and  $^{11}\text{C}$  (511 keV). The virtually unbreakable tungsten shield is lined with a PTFE plastic tube that totally stops the beta particles and prevents Bremsstrahlung. They also feature a syringe lock/release button, for ease of use, and the inside is covered in white Teflon® for easier readings.

### Specifications

**Shielding** 0.25 inch minimum

Model	Syringe	Long protection	ø int.	Weight
56-407	3 cc	2.3 in	12	1 lb (0.45 kg)
56-408	5 cc	2.5 in	15	1.25 lb (0.58 kg)
56-409	10 cc	3.25 in	20	1.64 lb (0.75 kg)



# Tungsten Plunger Shields

## Models 56-414 to 56-417

This patented design Tungsten Plunger Shield is ideal for both PET and diagnostic nuclear medicine.

It prevents radiation from leaking out of the back of the syringe shield, making for safer injections. It has an easy, slide-on design. Helps keep exposures ALARA.

### Specifications

**Weight** 1 lb (0.45 kg)

Model	Syringe
56-414	1 cc
56-415	2 cc, 2.5 cc, 3 cc
56-416	5 cc
56-417	10 cc



Syringe shield not included

# FDG Syringe Shields

## Models 56-410 to 56-413

This is a tungsten syringe shield with a sliding shielded cover to increase the operator's protection from exposure of high level radiation, such as the type emitted by  $^{131}\text{I}$  (364.5 keV),  $^{18}\text{F}$ ,  $^{15}\text{O}$ , and  $^{11}\text{C}$  (511 keV), especially on the syringe's piston side.

### Specifications

- The syringe shields have a 0.23 inch thick tungsten body for protection from the isotope
  - The interior is lined with plastic to stop the beta and help avoid Bremsstrahlung
  - The outside is lined with a sliding tungsten cover with 0.01 inch lateral thickness and 0.35 inch thickness on the piston side
- The shield has:**
- Two fast hook-and-release systems for the syringe piston
  - A security button to lock piston
  - One shaped shield on the front to limit scatter radiation

Model	Syringe	Length of syringe body	ø Syringe body	Weight	Leaded glass viewing window
56-410	5 cc	2.55 in	15	1.5 lb (0.68 kg)	NO
56-411	10 cc	2.67 in	20	1.8 lb (0.81 kg)	NO
56-412	5 cc	2.55 in	15	1.5 lb (0.68 kg)	YES
56-413	10 cc	2.67 in	20	1.8 lb (0.81 kg)	YES



**Note:** An optional viewing window made of 8 mm leaded glass is available for easy syringe viewing

For additional information, please contact Cardinal Health, Radiation Management Services customer service at 440.248.9300, 800.850.4608, or fax: 440.349.2307; located at 6045 Cochran Road, Cleveland, Ohio 44139-3303, USA.

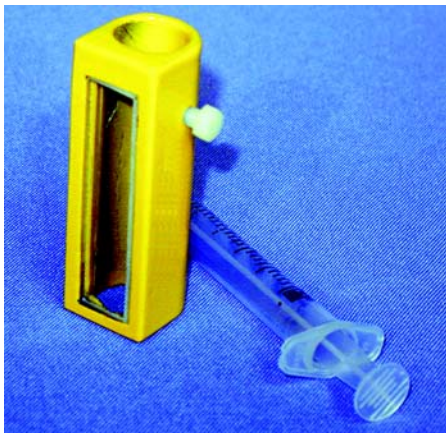
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# Thin-Wall Syringe Shields\* for $^{99m}\text{Tc}$

## Models 56-272 to 56-273



- Designed specifically for  $^{99m}\text{Tc}$  or any other gamma emitter < 140 keV
- Slim design
- Lightweight

Here is a slim, lightweight, lead and lead-glass shield that has been developed for use with technetium-99m and other radionuclides with gamma energies below 140 keV. It is similar in construction to the Gamma-Vue Syringe Shield but has a thinner lead wall with flat surfaces.

The shield consists of a 0.10 inch thick lead cylinder and a lead glass window which provides optimum shielding to the user. For a 10 mCi dose of  $^{99m}\text{Tc}$  (7.2 R/hr at 1 cm unshielded), the shield provides an attenuation factor of 200. A syringe is locked in position by a screw.

### Specifications

**Weight of shield** 0.20 lb (0.10 kg)

**Weight of replacement lead glass**  
0.05 lb (0.02 kg)

### Replacement lead glass windows

**56-272-1000** Thin-Wall Syringe Shield,  
2.5 to 3 cc, Replacement Lead Glass

**56-273-1000** Thin-Wall Syringe Shield,  
5 to 6 cc, Replacement Lead Glass

### Available model(s)

**56-272** Thin-Wall Syringe Shield, 2.5 to 3 cc

**56-273** Thin-Wall Syringe Shield, 5 to 6 cc

\* US Patent No. 3,596,659.



# All-Vue™ Syringe Shields

## Models 56-211 to 56-213

- Provide maximum visibility of syringe
- Large, clear viewing area
- Lightweight
- Replaceable lead glass window
- Reduce exposure by over 95%

All-Vue Syringe Shields give users the maximum viewing area required when dispensing radionuclides, a full 180°. Half of the shield is made of lead; the other half is clear, high-density lead glass. With an All-Vue Syringe Shield, exposure to the technologist is reduced by over 95%. A major feature of the shield is its replaceable lead glass window. If it should crack or break accidentally, a new window can be installed easily and at a relatively low cost.

### Specifications

**Weight of shield** 0.2 lb (0.09 kg)

**Weight of replacement lead glass**  
0.10 lb (0.04 kg)

### Replacement lead glass windows

**56-211-1000** All-Vue Syringe Shield,  
1 cc, Replacement Lead Glass

**56-212-1000** All-Vue Syringe Shield,  
2.5 to 3 cc, Replacement Lead Glass

**56-213-1000** All-Vue Syringe Shield,  
5 to 6 cc, Replacement Lead Glass

### Available model(s)

**56-211** All-Vue Syringe Shield, 1 cc

**56-212** All-Vue Syringe Shield, 2.5 to 3 cc

**56-213** All-Vue Syringe Shield, 5 to 6 cc

For additional information, please contact Cardinal Health, Radiation Management Services customer service at 440.248.9300, 800.850.4608, or fax: 440.349.2307; located at 6045 Cochran Road, Cleveland, Ohio 44139-3303, USA.

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# Gamma-Vue<sup>®</sup>

## Standard Syringe Shields<sup>†</sup>

Models 56-260 to 56-265



Nuclear Medicine



### Introduction

A Gamma-Vue Syringe Shield greatly reduces the radiation hazard from syringes containing millicurie quantities of radionuclides. For example, where 8 mCi of unshielded <sup>99m</sup>Tc would normally expose the technologist's fingers to 5.8 R/hr at 1 cm, a Gamma-Vue Syringe Shield reduces this by a factor of up to 500. For <sup>131</sup>I, the dose rates are reduced four-fold.

The shield consists of a 0.19 inch thick lead cylinder with a high-density lead glass panel for viewing the calibration marks of the inserted syringe. Syringes are held in place by pressure from a plastic screw. One end of the lead wall is tapered to assure minimum interference with injections.

### Specifications

**Weight of shields** 0.35 lb (0.16 kg)

**Weight of replacement lead glass** 0.05 lb (0.02 kg)

### Replacement lead glass windows

**56-265-1000** Gamma-Vue Syringe Shield, 1 cc, Replacement Lead Glass

**56-262-1000** Gamma-Vue Syringe Shield, 2.5 to 3 cc, Replacement Lead Glass

**56-263-1000** Gamma-Vue Syringe Shield, 5 to 6 cc, Replacement Lead Glass

**56-260-1000** Gamma-Vue Syringe Shield, 10 to 12 cc, Replacement Lead Glass

**56-261-1000** Gamma-Vue Syringe Shield, 20 cc, Replacement Lead Glass

<sup>†</sup> US Patent No. 3,596,659.

- **Lead and lead-glass protect fingers and hands**
- **Compatible with disposable syringes of all standard sizes**

### Available model(s)

**56-265** Gamma-Vue Syringe Shield, 1 cc (Tuberculin)

**56-262** Gamma-Vue Syringe Shield, 2.5 to 3 cc

**56-263** Gamma-Vue Syringe Shield, 5 to 6 cc

**56-260** Gamma-Vue Syringe Shield, 10 to 12 cc

**56-261** Gamma-Vue Syringe Shield, 20 cc

For additional information, please contact the Radiation Management Services business of Cardinal Health at 440.248.9300, fax 440.349.2307 or e-mail [rmsinfo@cardinal.com](mailto:rmsinfo@cardinal.com); located at 6045 Cochran Road, Cleveland, Ohio 44139-3303, USA.

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