

## **Tungsten PET Shields**

### **What is PET?**

Brachytherapy positron emission tomography (PET) is one of the nuclear medicine techniques available for diagnosis. Whilst X-rays provide information on the structure of the body, PET shows the chemical function of a particular organism. PET involves the injection of FDG (a glucose-based radionuclide) from a shielded syringe into the patient. As the FDG travels through the patient's body, it emits gamma radiation detected by a gamma camera, from which the chemical activity within cells and organs can be seen. Any abnormal chemical activity may be a sign that tumors are present. PET scans are frequently used to detect cancerous tumors and diseases of the brain and coronary arteries.

### **Tungsten PET Shields Dispensing System**

The solid tungsten PET shields dispensing system permits the safe dispensing of high- energy PET radiopharmaceuticals without the need for expensive remote handling systems. The magnetic "docking" feature of the solid tungsten syringe shield into the dispensing pig allows low exposure dose drawing. It is designed with 3.5 cm thick walls and accommodates up to a 30ml vial.



### **Tungsten PET Shields Dispensing Pig 30ml**

Tungsten PET shields dispensing pig provides a full 3.5 cm of solid tungsten to safely shield high energy PET radiopharmaceuticals. Designed to accommodate 30ml vials (adapters are available for smaller vials).The threaded lid attaches to the body of the pig so that no radiation "shine through" occurs .Tungsten stopper, with attached pull ring is held in place magnetically. The handle permits the pig to be easily carried as a transport container as well as a dispensing pig. Weight 43 lbs.

### **Tungsten PET Shields 3/5cc**

Tungsten PET shields magnetically docks with the PET dispensing pig. Designed to accept 3cc and 5cc B-D syringes, it places the needle inside the vial septum when engaged. The body of the shield is constructed of solid tungsten 2.1cm thick for maximum shielding. The external calibration rod allows the precise volume to be withdrawn without a leaded glass viewing port, where high exposure levels cannot be adequately shielded. The system allows the plunger to be pulled back

with a pair of forceps, allowing you to keep your exposure ALARA. Weight 5.8 lbs



### **Tungsten PET Shields for Pig TM Syringe**

PET Pig TM permits the safe transport and administration of unit dose PET radiopharmaceuticals. It's constructed with solid tungsten walls 2.25cm thick and yet weighs only 15.6lbs. The "T" handle on the PET Pig TM cap allows the unit to be easily lifted out of traditional "ammo can" delivery cases. The threaded top provides easy access to the 3cc or 5cc syringe. The use of thermos style handle reduces hand exposure by permitting the PET Pig TM to be carried to the imaging suite without holding container sidewalls. Prior to injection, the base unscrews, allowing the center portion to be used as a syringe shield.

### **Tungsten PET Shields Block**

Specially designed for PET facilities or nuclear medicine departments that are working with high-energy positron emitting isotopes. Large tungsten PET shields block, which is the ideal addition to labs performing these specialized exams. Usually, the density would be control at the high level ranging from 17.0 g/cm<sup>3</sup> to 18.5g/cm<sup>3</sup>, which is the most popular material for radiation protection.