

## Model 243 Shielded Well Gamma Sample Counter Head



### Introduction

The Model 243, along with a pulse height analyzer system, is used for gamma ray assay and wipe test analysis. The Model 243 is shielded with 1.3 cm (0.5 in.) of lead to improve sensitivity by reducing background and other external radiation. An optional 1.3 cm (0.5 in.) lead sleeve is available for additional background reduction (Part No. 7379-044). The detector is an integrated 4.4 x 5.1 cm (1.75 x 2 in.) (Dia x thickness) NaI (Tl) crystal scintillator optically coupled to a 5.1 cm (2 in.) diameter, 10-stage photomultiplier tube.

### Specifications

Part Number: 47-1621

**INDICATED USE:** gamma assay and wipe test analysis

**SUGGESTED COUNTING INSTRUMENTS:** Models 2000, 2200, 2221, and others

**WELL:** 1.7 cm x 3.9 cm (0.7 x 1.6 in.) (Dia x L)

**DETECTOR:** 4.4 x 5.1 cm (1.8 x 2 in.) (Dia x L) integral NaI(Tl) well scintillator

**SENSITIVITY:** will detect 0.005  $\mu\text{Ci}$  gamma or 200 dpm removable contamination for  $^{99\text{m}}\text{Tc}$ ,  $^{131}\text{I}$ ,  $^{201}\text{Tl}$ ,  $^{111}\text{In}$ ,  $^{125}\text{I}$ ,  $^{137}\text{Cs}$ , and  $^{67}\text{Ga}$

**EFFICIENCY (4 $\pi$ ):** 80% for  $^{125}\text{I}$ , ( $^{125}\text{I}$  efficiency is based on  $^{129}\text{I}$  efficiency of 65%), 90% for  $^{99\text{m}}\text{Tc}$ , 33% for  $^{137}\text{Cs}$ , 43% for  $^{60}\text{Co}$

**BACKGROUND:** 1000 cpm or less (optional 1.3 cm [0.5 in.] lead sleeve for background reduction Part No. 7379-044)

**CONNECTOR:** series "C"

**OPERATING VOLTAGE:** 500–1200 volts

**PHOTOMULTIPLIER TUBE:** 5.1 cm (2 in.) diameter

**LEAD SHIELDING:** 1.3 cm (0.5 in.) thick painted lead wall and removable cap

**SIZE:** base: 20.3 x 20.3 cm (8 x 8 in.) (L x W)

body: 8.9 x 27.9 cm (3.5 x 11 in.) (Dia x H)

**WEIGHT:** 18.1 kg (40 lb)

**SHIPPING WEIGHT:** 20.4 kg (45 lb)

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.

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