Model 44-21
Beta & Low Energy Gamma Detector

Radiation Detection for a Safer World

Part Number: 47-1560

Specifications

INDICATED USE: beta, low-energy gamma survey
SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters, and scalers
CONNECTOR: series “C” (others available)
DETECTOR: scintillator, 2.54 cm (1 in.) diameter x 1 mm thick NaI adhered to a 0.03 cm (0.01 in.) thick plastic scintillator
WINDOW: 3.4 mg/cm^2
WINDOW AREA: 5.1 cm^2 active and open
EFFICIENCY (4π): 38% for ^{125}I; 19% for ^{129}I; 4% for ^{14}C; 28% for ^{32}P
BACKGROUND (10 µR/hr): 450 cpm
ENERGY RESPONSE: energy dependent
NON-UNIFORMITY: less than 10%
PHOTOMULTIPLIER TUBE: 3.8 cm (1.5 in.) diameter, 10 stage
OPERATING VOLTAGE: typically 500 to 1200 volts
CONSTRUCTION: anodized aluminum housing with beige powder coat
TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F); may be certified to operate at -40 to 65 °C (-40 to 150 °F)
SIZE: 5.1 x 18.5 cm (2 x 7.3 in.) (Dia x L)
WEIGHT: 0.5 kg (1.0 lb)

Options

Model 180-1, Model 180=1L, and **Model 180-24 Sample Holders** provide repeatable geometry for counting wipes, filter paper, or slides at user-selectable spacings of 0.32, 0.64, 1.3, 2.5, and 5.1 cm (0.125, 0.25, 0.5, 1, and 2 in.) from the detector.
Model 180-1: anodized aluminum frame, sample tray, and colllimator (P/N 47-1675)
Model 180-1L: as above, but with 0.64 cm (0.25 in.) painted lead collimator (P/N 47-2988)
Model 180-24: anodized aluminum frame and sample tray (no collimator) (P/N 47-2631)
Planchets: 5.1 cm x 3.2 mm (2.0 x 0.125 in.) (Dia x thickness) in stainless steel or aluminum
Stainless Steel (P/N 7525-371-01); Aluminum (P/N 7525-371) Minimum order quantity of 500

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