

# 489-200WTF Wipe Test Fixture for Advanced Survey Meter



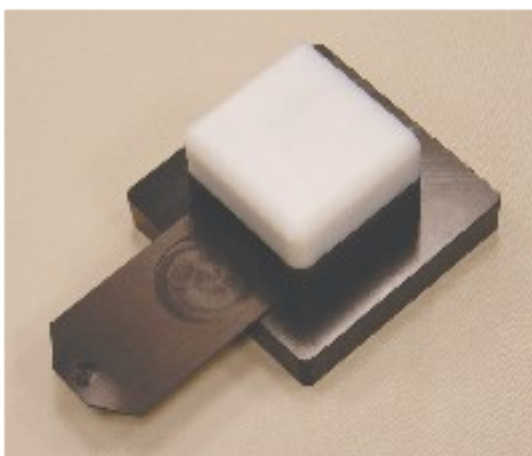
## Introduction

The Wipe Test Fixture for Advanced Survey Meter (Model 489-200WTF) uses a high efficiency NaI(Tl) scintillation probe (Model 489-200) in conjunction with a lead shielded sample holder. It employs a removable wipe test holder or tray positioned below the shielded probe. Under these conditions, background radiation is minimized and wipe test counting is maximized.

## Applications

The wipe test fixture concept evolved from the need to more accurately measure Technetium-99m ( $^{99m}\text{Tc}$ ). Most users don't realize that they are not accurately measuring  $^{99m}\text{Tc}$  when using a Geiger-Mueller pancake probe. Because of their inherently poor  $^{99m}\text{Tc}$  efficiency, Geiger-Mueller pancake probes are incapable of accurately measuring  $^{99m}\text{Tc}$  samples in a timely fashion. In order to meet current NRC and Agreement state regulations, it would be necessary to count  $^{99m}\text{Tc}$  samples for a minimum of 30 minutes per sample. The wipe test fixture is designed to precisely measure  $^{99m}\text{Tc}$  within 30 seconds at efficiencies far surpassing those currently in use. It can count effectively in rate mode and display in any known unit, including "dpm  $^{99m}\text{Tc}$ " or " $\mu\text{Ci } ^{99m}\text{Tc}$ ". When used with the ASM-990, or 992 advanced survey meters, the wipe test fixture is able to be calibrated to various other isotopes and thereby expand its role as a wipe test counter.

- ◆ Effectively detects removable radioactive contamination (wipe testing)
- ◆ High  $^{99m}\text{Tc}$  efficiency
- ◆ Direct reading capability with ASM-990 and 992 Advanced Survey Meters and isotopic calibrations
- ◆ Removable wipe test sample holder positioned below shielded probe, minimizes background radiation and maximizes wipe test counting



## Product Specifications

<b>Model 489-200WTF</b>	<b>Size</b> <b>Weight</b> <b>Shielding</b> <b>Sample tray spacing</b> <b>Sample size</b> <b>Efficiency:</b>	127 x 127 x 83 mm 2.45 lb (1.11 kg) 6 mm lead 23 mm and 16.5 mm 47 mm $^{99m}\text{Tc}$ : 22% efficiency (4 pi), 0.0005 MDA $\mu\text{Ci}$ $^{131}\text{I}$ : 24% efficiency (4 pi), 0.0004 MDA $\mu\text{Ci}$ $^{201}\text{Tl}$ : 25% efficiency (4 pi), 0.0004 MDA $\mu\text{Ci}$ $^{89}\text{Sr}$ : 23% efficiency (4 pi), 0.0004 MDA $\mu\text{Ci}$ $^{90}\text{Sr}$ : 4% efficiency (4 pi), 0.0020 MDA $\mu\text{Ci}$ $^{137}\text{Cs}$ : 9% efficiency (4 pi), 0.0010 MDA $\mu\text{Ci}$ $^{60}\text{Co}$ : 16% efficiency (4 pi), 0.0006 MDA $\mu\text{Ci}$ $^{241}\text{Am}$ : 2% efficiency (4 pi), 0.0050 MDA $\mu\text{Ci}$
<b>Probe (Model 489-200)</b>	<b>Type</b> <b>Radiation detected</b> <b>Applications</b> <b>Crystal dimensions</b> <b>Calibration tolerance</b> <b>Weight (approx).</b>	Nal (Tl) pancake, scintillator optically coupled to PMT Gamma and x-ray above 25 keV, beta above 100 keV Beta, gamma frisker for nuclear medicine is 10 times more sensitive than GM probe 2 x 2 x 0.5 in (50.8 x 50.8 x 12.7 mm) $\pm 10\%$ 0.78 lb (0.35 kg)