

# Energy Compensation Filters

for the Model 44-9 GM Pancake Probe

*Radiation Detection for a Safer World*



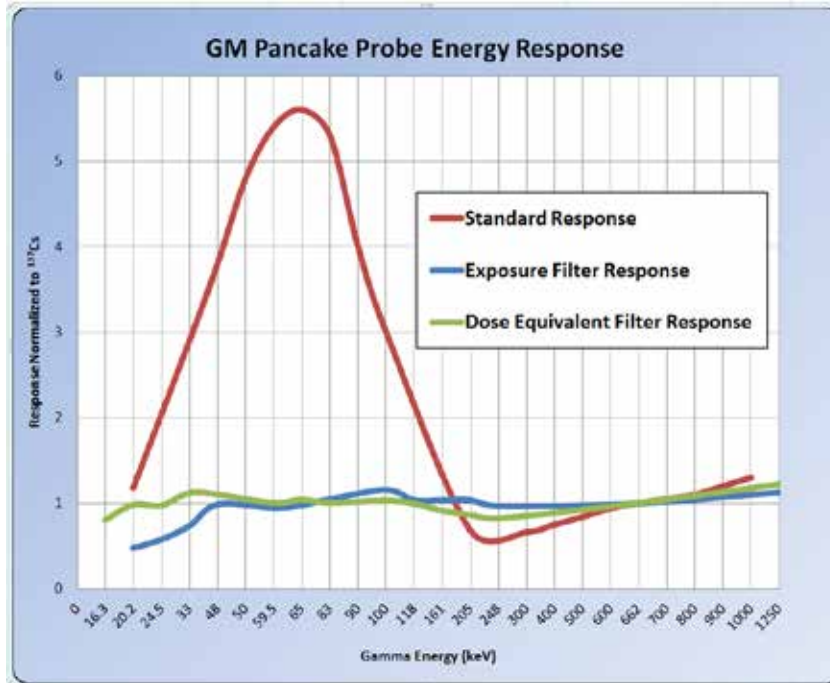
Ludlum Measurements, Inc.



Exposure Filter



Ambient Dose Filter



## Introduction

Ludlum offers two energy compensation filters that flatten the energy response of its popular Model 44-9 GM pancake detector to facilitate measuring either Exposure or Ambient Equivalent Dose. One filter is formulated specifically for measuring Exposure (Roentgen); the other for use in measuring Ambient Equivalent Dose (Sievert).

As most know, the venerable GM pancake has a significant over-response at lower energies between approximately 20 to 160 keV (see red line on graph above). Any exposure or dose measurements taken with an unfiltered GM pancake detector would thus have unacceptable errors at these lower energies. The filters developed by Ludlum flatten the response to within  $\pm 20\%$  referenced to <sup>137</sup>Cs (662 keV) over an energy range of 33 keV to 1.2 MeV for Exposure and down to 20 keV for Ambient Dose Equivalent. These filters fit the Model 44-9 Series from serial number 97000 and up. Neither will fit the Model 44-9-13 or older units unless modified.

Both filters simply snap on across the face of any Ludlum Model 44-9 GM pancake probe whenever these type of measurements are desired. The filters are then again easily removed to continue on with measuring contamination (cpm or Bq). The small hole added to the tab of the filter provides a means to secure it to the instrument preventing loss or misplacement of the filter.

Filters can be purchased separately or together with a new Model 44-9 probe. The Dose filter supplies a filter while the Exposure filter comes in a kit that provides the filter plus a replacement detector protective screen that can easily be changed out.

A complete test report can be reviewed at [www.ludlums.com](http://www.ludlums.com) by typing 44-9EXP in the search box.

Description	Part Number
<b>44-9 Exposure Filter Kit</b> <i>(includes filter &amp; grill)</i>	4002-1066
<b>44-9 Ambient Dose Filter</b>	2002-1050
<b>Model 44-9EXP</b> <i>(Model 44-9 probe with exposure filter kit installed)</i>	47-3788
<b>Model 44-9DOSE</b> <i>(Model 44-9 probe with ambient dose equivalent filter installed)</i>	47-3789



Model 44-9EXP



Model 44-9DOSE