

Model L-840

Dual Source Scatter Phantom



Ludlum Measurements, Inc.



Introduction

The Model L-840 simulates in-vivo scatter conditions required to measure gamma camera deadtime.

Deadtime is the interval in which a gamma camera, while processing incident radiation, is insensitive to additional radiation. Measurement of these phenomena is important because, during higher count rates, losses of data during the 'deadtime' degrade the quantitative data. Accurate measurement allows for the mathematical correction of the deadtime losses.

During standard clinical conditions, the deadtime is a function of the scatter within the radiation source and its immediate surroundings. The phantom provides the simulated characteristics of forward and back scatter of the ^{99m}Tc gamma rays and allow the measurement* of the camera's deadtime.

The deadtime measurement can typically be acquired in less than 15 minutes. The phantom is made of acrylic and has two holes, spaced 5cm apart (and 5cm from the face of the phantom) to accommodate the radioactive sources (not included) to measure the count rates and associated deadtime.

*Reference: Ralph Adams, Gerald J. Hine, and C. Duane Zimmerman, "Deadtime Measurements in Scintillation Cameras Under Scatter Conditions Simulating Quantitative Nuclear Cardiology," . The Journal of Nuclear Medicine, 19 (1978), 538-544

Specifications

Part Number: 99-9434

MATERIAL: acrylic

DIMENSIONS: 20 x 15 x 20 cm (7.9 x 5.9 x 7.9 in) (L x W x H)

HOLE DIMENSIONS: 1.7 x 12 cm (0.7 x 4.7 in) (D x L)

WEIGHT: 7 kg (16.5 lb)

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

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