

QA PHANTOMS

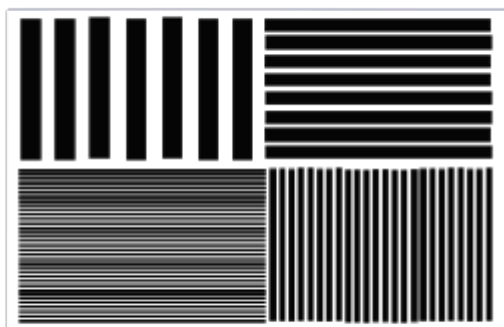


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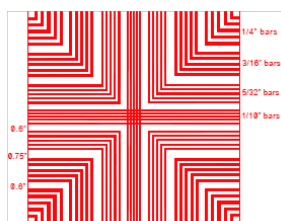
Ludlum Medical Physics (LMP), a division of Ludlum Measurements, Inc., specializes in radiation safety and medical imaging quality assurance (QA) solutions. Their comprehensive product line supports healthcare professionals in maintaining high standards of patient safety and diagnostic accuracy across various medical disciplines.

Product offering

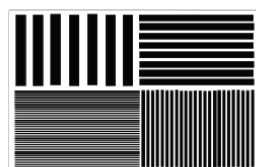
**Model L-840 Dual
Source Scatter
Phantom**



**Model L-890 Gamma
Camera Bar Phantom**



**Model L-820 Extra
Large Gamma Camera
Bar Phantom**



Model L-840 Dual Source Scatter Phantom



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.



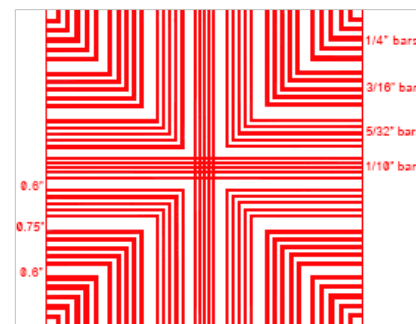
During standard clinical conditions, the deadtime is a function of the scatter within the radiation source and its immediate surroundings. The phantom provides the simulated characteristics of forward and back scatter of the ^{99m}Tc gamma rays and allow the measurement* of the camera's deadtime.

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

Model L-890 Gamma Camera Bar Phantom



The Model L-820 and L-890 are ideal for daily/weekly QA checks of scintillation camera performance. The Bar and Test Pattern Phantoms measure intrinsic and collimator spatial resolution (ability to see small objects) and spatial linearity (ability to correctly position image data), confirming the gamma camera's overall ability to identify and properly display small anatomic objects.



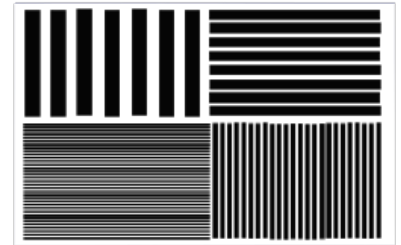
Each of the sets of parallel lines is precisely machined onto a plastic sheet. The lines are filled (cast) with Cerrobend[®] high-density metal alloy. This causes the gamma radiation to be attenuated, thereby providing the QA image.

The phantom is easy to use and satisfies most regulatory quality control requirements for intrinsic resolution. By checking the gamma camera's resolution on a routine basis with this phantom, it will be possible to make quick adjustments to ensure the consistent quality of the images being taken from the data that is collected.

Model L-820 Extra Large Gamma Camera Bar Phantom



The Model L-820 is ideal for daily/weekly QA checks of scintillation camera performance. The Bar and Test Pattern Phantoms measure intrinsic and collimator spatial resolution (ability to see small objects), and spatial linearity (ability to correctly position image data) confirming the gamma camera's overall ability to identify and properly display small anatomic objects.



Each of the sets of parallel lines is precisely machined onto a plastic sheet. The lines are filled (cast) with Cerrobend® high-density metal alloy. This causes the gamma radiation to be attenuated, thereby providing the QA image.

The phantom is easy to use and satisfies most regulatory quality control requirements for intrinsic resolution. By checking the gamma camera's resolution on a routine basis with this phantom, it will be possible to make quick adjustments to ensure the consistent quality of the images being taken from the data that is collected.