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PROGRAM AND ABSTRACTS

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FABRICATION OF A REALISTIC PHANTOM FOR CALIBRATION OF  
PLUTONIUM LUNG COUNTERS\*

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ABSTRACT

The development of an adequate program for plutonium lung counting depends on the availability of a suitable phantom. Because transmission of the weak x-rays of plutonium is sensitive to small differences in tissue composition and thickness, a phantom should simulate the geometry and x-ray attenuation properties of the human torso as accurately as possible. The construction of a phantom modeled from a male caucasian torso including the rib cage and cast plastic organs will be discussed. The important features considered include selection of tissue equivalent plastic for the organs, preparation of the rib cage, and fabrication of moulds for the organs, torso cavity, and torso surface.

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