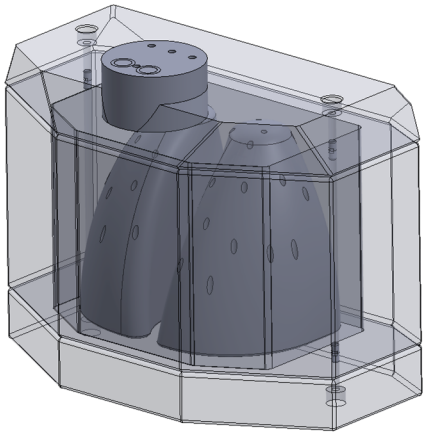
Chest and neck phantom

The Chest and Neck phantom is used for the calibration of whole-body counters (WBC) to measure the activity of radionuclides incorporated in the human body (lungs, thyroid gland) using scintillation and semiconductor gamma radiation detectors within the energy range of 50 to 3000 keV.



DESCRIPTION

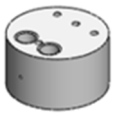
The chest phantom contains left and right lung simulators, and the neck phantom contains a thyroid gland simulator.

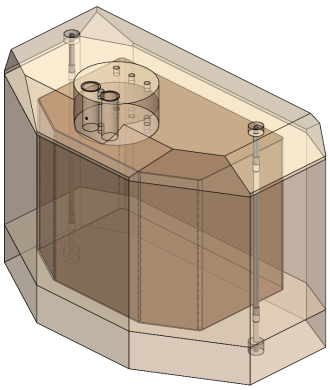
The chest phantom is constructed from polyethylene units that simulate the thorax of an adult man. Inside the thorax simulator, there is a polyurethane unit representing the lung simulator (two pieces). Radionuclides (Co-60, Am-241 or other) are uniformly distributed within the lung simulators.

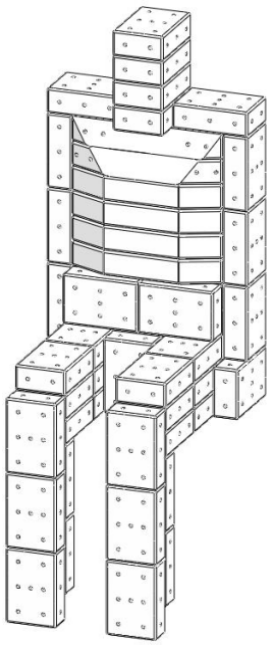
The neck phantom consists of reference volumetric sources (2 pcs) with the radionuclide Ba-133 and simulates a thyroid gland with incorporated radionuclide I-131. The chest phantom has connection points for installing the neck phantom.

The density of the material of lung simulator is 0.26 g/ml.

The active volume of the right lungs is 2700ml, left lungs is 2430ml.







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