ADVANCED COMPOSITE MATERIALS

Features
- Correspondence with structure of human body and its organs (anthropomorphism)
- Tissue equivalence to biological tissues
- Uniformity of distribution of components and activities by volume
- Chemical inertness and stability
- Hygienic in comparison with samples of biological tissues
- Making models by molding;
- Possibility of introduction of required activity of radionuclides
- Certificate of Russian State Standard

REFERENCE MATERIALS

REFERENCE VOLUMETRIC SAMPLES OF ACTIVITY

Type of phantom
- The background phantom not containing the radionuclide organs models, is intended for measuring the absorbed doses of X-ray, bremsstrahlung and gamma radiation in organs and tissues of the phantom from external ionizing radiation sources using thermoluminescent detectors (TLD) installed in the special pits

While making the volumetric samples of activity it is necessary to ensure their maximum possible concordance with the measured sample by the geometric and physical-chemical characteristics such as: shape, size, density, mass absorption coefficient of X-ray and gamma radiation, the distribution of activity.

HUMAN BODY PHANTOM

Density of material imitating environmental samples:
- 0.15 – 2.5 g/cm³ of samples of core:
- 2.5 – 3.8 g/cm³ of samples of metal:
- 7.5 – 8.2 g/cm³

Gamma and beta radiation spectrometers are intended for:
- measuring γ-quanta energy range;
- identification of radionuclides;
- measuring activity of both natural (NRR) and artificial gamma-radiating radionuclides in environmental samples and other samples.

MEASURING INSTRUMENTS

GAMMA AND BETA SPECTROMETERS

Spectrometers of human radiation are intended for measuring incorporated gamma-radiating radionuclides content in whole human body, in human lungs, in human thyroid and in other organs.

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