



Model IMRT-2HN IMRT Head and Neck Phantom

The Model IMRT-2HN head and neck phantom is manufactured from water-equivalent plastic material. It faithfully mimics actual tissue within 1% from 50 keV to 25 MeV for accurate simulation from CT planning to treatment delivery.

A unique interchangeable plug design and cross sectioning allow various phantom versions to accommodate a multitude of dose measurement devices including ion chambers, film and gels. The plug locations begin in the center and 3, 4, 5 and 6 cm from center, 90 degrees apart. Cross sections accommodate standard ready-pack films and special fiducial markers to allow for easy CT-to-film registration. A 6.35 cm thick section is machined to accommodate a film stack for 3D image reconstruction or a Barrex cylinder for dosimetry gel.

The phantom is round in shape with a diameter of 16 cm, and 30 cm long when fully assembled. The IMRT-2HN includes an alignment plate with two rails that positions the phantom sections and a holding device that compresses the sections and films during irradiation. Both devices are made from relatively water-equivalent plastics to avoid any influence on the measurement results.

Features:

- ▶ Verify heterogeneity correction
- ▶ Correlate CTU to electron density
- ▶ Check dose distributions in sensitive areas
- ▶ Check depth dose and absolute dose
- ▶ 2D and 3D isodoses
- ▶ Calibrate film with ion chamber
- ▶ Verify individual patient treatment plans

Model IMRT-2HN includes:

- 1 x 15 cm water equivalent homogenous section drilled to accommodate rod inserts
- 2 x 1 cm film slabs, 10 x 10 cm film cavity with a set of CT to film fiducial markers
- 1 x 6.35 cm slab that accommodates 002FC or 002GC cassettes
- 1 x Film stack for 3D reconstruction
- 2 x 1 cm spacer slabs
- 1 x 2 cm spacer slab
- 1x 1 cm end slabs
- 1 x 1.6 cm end slab
- 1 x Water equivalent insert with ion chamber cavity*
- 1 x Bone equivalent insert with ion chamber cavity*
- 5 x Water equivalent solid rod inserts
- 1 x Bone equivalent solid rod insert
- 1 x Alignment base
- 1 x Compression device

*Specify chamber type

Accessories

- 002GC 6.35 cm Gel dosimetry stack with 3 spacers.
- 002ED Set of 4 ED plugs, set of 4, lung, bone, muscle, adipose
- 002CS Foam lined carrying case

