

Universal IMRT Verification Phantom



Acrylic phantom for IMRT dose verification using radiographic film and 0.125 cm³ ionization chambers

Features

- ▶ Makes it possible to verify IMRT dose delivery
- ▶ Checks either IMRT sub beams or total beams
- ▶ Accommodates radiographic film and up to five ionization chambers
- ▶ Marks the film position by perforation

The purpose of IMRT dose verification phantoms is to verify dose distributions and absolute dose values produced by IMRT beams, either sub beams or total beams. The verification is done by irradiating an IMRT verification phantom and by comparing the measured phantom values and the calculated values of the radiotherapy treatment planning system.

The Universal IMRT Verification Phantom type T40020¹ enables the user to check the spatial distribution of IMRT beams using a radiographic film. Ion chambers connected to integrating dosimeters measure absolute dose values. The phantom accommodates a film of 25 cm x 30 cm and up to five 0.125 cm³ ion chambers type 31002/31010. The position of the film is marked by needles with respect to the phantom and the chamber orientation. The phantom is composed of two 30 cm x 30 cm acrylic blocks, the depth of the film is 50 mm, and the depth of the ion chambers is 60 mm. The simple shape of the phantom makes it easy to enter its dimensions into the treatment planning system.

¹ The design of the phantom was suggested by Jörg Bohsung of the University Hospital Charité in Berlin, Germany.

Ordering Information

T40020.1.010 Universal IMRT verification phantom

- ▶ Semiflex Ionization Chambers *page 16*