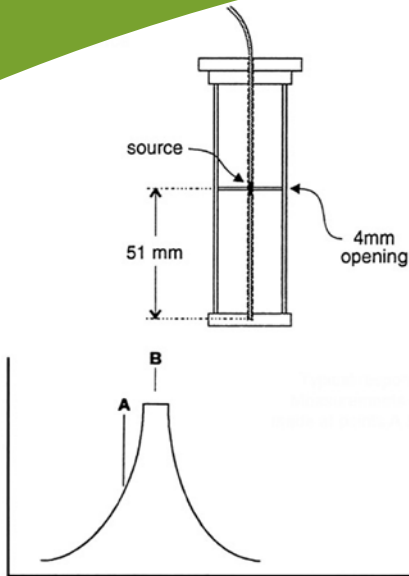


Model HDR1000+ Accessories Brachytherapy Re-Entrant Well Chamber



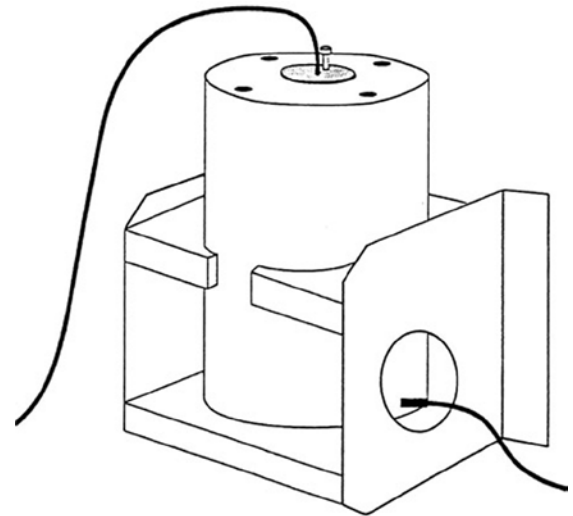
Model 70008 Quality Assurance Insert

The Quality Assurance Tool tightly collimates the radiation received by the HDR1000+ ion chamber to a narrow plane. Four short measurements are taken as the Ir-192 source is advanced to the 4 mm opening. These measurements provide the information for (1) source positioning verification, (2) timer accuracy, (3) consistency of source activity. A constant, K, is determined with formulas outlined in the instructions. If all of the determinants of K remain within 1%, the user can be assured that the source position has remained constant to within 0.3 mm, the source activity calibration has remained constant to within 0.01 Ci, and the error in dwell time is less than 0.1 second.

Features:

- ▶ Source positioning verification to 0.3 mm
- ▶ Timer accuracy verification
- ▶ Consistency of source activity
- ▶ Fast, 10-15 minute procedure
- ▶ No films and developers used
- ▶ No multiple distance estimates

Reference: DeWerd, Jursinic, Kitchen, Thomadsen: "A new daily quality assurance tool for HDR systems" Med. Phys. 22, pp.435-440, 1995.



Model 70007 Wall Mounted Bracket

Periodic Quality Assurance for your High Dose Rate Remote Loading System

Verification of Source Presence:

Check the relative output/activity of your source each day before patients are treated, and again at the end of the day.

Source Strength and Calibration Accuracy:

The rate of readings to calibration should be constant after decay of $(73.83 \text{ d} = T^{1/2})$ regardless of wall scatter. This provides a verification of your source strength, thereby assuring the accuracy of your calibration.

Timer Consistency:

Two or more readings with the same setting will indicate the consistency of the timing operation