

## Microchambers

**Exradin® A1 Ion Chamber –  
0.056 cc Air-equivalent Thimble**

**Exradin® A14 Ion Chamber –  
0.009 cc Air-equivalent Thimble**

**Exradin® A14P Ion Chamber –  
0.002 cc Air-equivalent Planar**

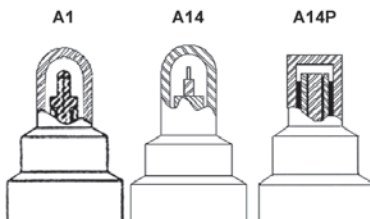
Microchambers were developed specifically for the assessment of radiation fields encountered in stereotactic radiosurgery. Their excellent spatial resolution and waterproof construction also make them well suited for other radiation beam measurements, including beam calibrations.

Outwardly, the Exradin® A14 is identical to the Exradin® A1, but with a sensitive volume 5.5 times smaller, the A1 and A14 feature a true cylindrical chamber design, whereas, the Exradin® A14P features a true planar design with a 1.5 mm collector diameter and collector gap of 1 mm.

The chamber wall, collector and guard are made entirely of C-552 Shonka conducting plastic, simulating air. C-552 is an air-equivalent formulation, which makes it ideally suited to the measurement of exposure. C-552 consists of polyvinylidene fluoride, carbon black and silica. Density is 1.76 g/cm<sup>3</sup>. Electrical resistivity is on the order of 0.03 ohm-meter. Tissue-equivalent versions of these chambers are also available.

### Features

- ▶ Waterproof construction
- ▶ Extremely small gas volume
- ▶ Fully guarded
- ▶ Gas flow capability



### Specifications

	Exradin® A1	Exradin® A14	Exradin® A14
Volume	0.056 cc	0.009 cc	0.0023 cc
Sensitivity	0.0018 nC/cGy	0.003 nC/cGy	0.008 nC/cGy
Thimble	6 mm O.D., 4 mm L.D.		
Wall	C552, 1 mm thick, 176 mg/cm <sup>2</sup>		
Collector dia.	1.5 mm	0.33 mm	1.5 mm
Collector length	4.4 mm	1.27 mm	zero length
Reference point	4 mm	2 mm	1.5 mm
Electrode gap	N/A	N/A	1 mm
Leakage	< 1 fA		
Bias	-300 V typical, 1000 V maximum		

- Standard stem ..... Black phenolic, 2-piece, 10 and 12.5 cm threaded together, 12.7 mm diameter (stem may be omitted)
- Optional stems..... 10 cm, 12.5 cm, 23 cm or A14-ROD\*
- Cable ..... Triaxial, 2 meters long
- Connector ..... Triaxial BNC (TNC optional)

### Accessories

- RSVP ..... Radiosurgery Verification Phantom
- A14-ROD ..... 30.5 cm Lexan stem and phenolic ball assembly, adapts A14 to an RSVP phantom
- 3BM-F10 ..... 10 m extension cable, triax BNC, male/female with caps and chains (also available in custom lengths and/or mounted in a reel)
- 3BF-3TMF ..... Triaxial BNC to TNC adapter

\* Stems are captive by the cable connector. To change the stem, the connector must be removed and reassembled.