



# EXRADIN A26 ION CHAMBER PATENT PENDING



## REFERENCE-CLASS QUALITY

The only microchamber that was designed to meet reference class criteria from IEC 60731 and TG-51



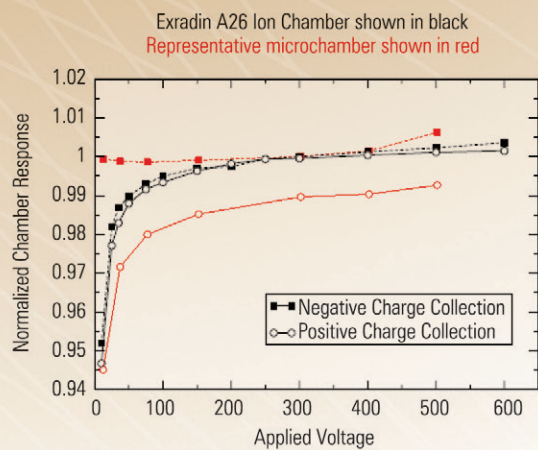
### ● SMALL FIELD EXCELLENCE

Experience the same measurement quality in a microchamber you have come to expect from your reference chamber.

- Rapid settling
- Stable, reproducible measurements
- Realistic and meaningful ion recombination corrections
- Minimal polarity dependence
- Minimal energy dependence

### ● REDUCED VOLUME AVERAGING EFFECTS

Uniform 4.3 mm diameter spot size reduces volume averaging effects and eliminates angular dependencies of volume averaging.



The Exradin A26 Ion Chamber does not exhibit the polarity effects seen in microchambers.

### ● FULLY-GUARDED MICRO-CHAMBER

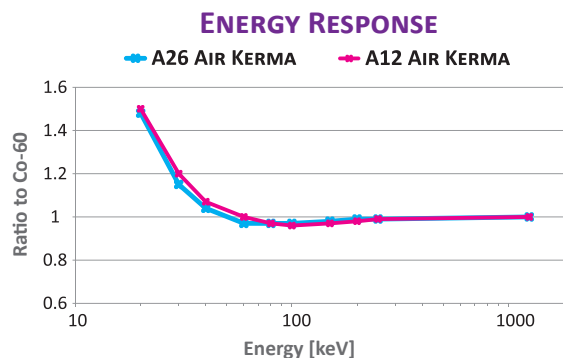
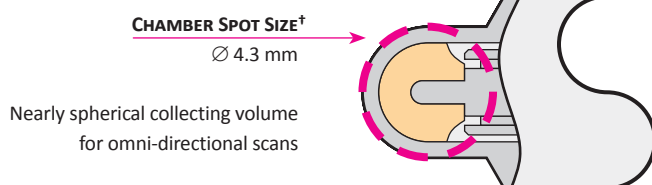
Each Exradin thimble chamber has a guard that extends well beyond the insulator's surface, ensuring that the electric field defining the chamber's collecting volume is cleanly shaped by the guard.

Courtesy of Miller, Jessica R., Ph.D.  
Characterization and optimization of microionization chambers  
Dissertation, University of Wisconsin - Madison  
ProQuest/UMI, 2013 (Publication No. 3606471)



## The Exradin Advantage

- MR compatible version available
- Inherently waterproof construction eliminates the need for sleeves or protective coatings.
- Rugged conductive plastic provides years of use.
- Lack of stem-effect and low leakage for precise, reliable measurements.
- Versatile for absolute dosimetry calibrations in water, air or other phantom material.
- Minimal settling time.



Example Reference Class Criteria*	Reference Class Performance	Exradin A26
$P_{\text{leak}}$ : Leakage	< 0.1%	✓
$P_{\text{pol}}$ : Polarity	< 0.4% correction	✓
$P_{\text{pol}}$ : Polarity	< 0.5% max variation	✓
$P_{\text{ion}}$ : ion recombination	Linear with dose per pulse	✓
Initial recombination	Within 0.3% of unity	✓
Polarity dependence of $P_{\text{ion}}$ :	< 0.1% between positive and negative bias	✓
Chamber stability	within 0.3% change over 2 years	Chamber is not yet 2 years old

\* per TG 51

† not minimum field size

### EXRADIN A26 ION CHAMBER (REF 92746) SPECIFICATIONS

<b>COLLECTING VOLUME</b>	0.015 cm <sup>3</sup>	<b>SHELL, COLLECTOR AND GUARD MATERIAL</b>	C552 Shonka air-equivalent plastic
<b>SPOT SIZE</b>	4.3 mm	<b>MAXIMUM POLARIZING VOLTAGE</b>	1000 V
<b>CENTROID OF THE COLLECTING VOLUME</b> (from exterior tip of shell)	1.98 mm	<b>NOMINAL LEAKAGE CURRENTS</b>	± 10 fA
<b>OUTSIDE DIAMETER OF SHELL COLLECTING VOLUME</b>	4.3 mm	<b>WATERPROOF</b>	Yes
<b>INSIDE DIAMETER OF SHELL COLLECTING VOLUME</b>	3.3 mm	<b>PRODUCT STANDARDS</b>	CE 0413
<b>SHELL WALL THICKNESS</b>	0.5 mm	Designed to meet IEC60601-1, IEC60731	
<b>INCLUDED BUILDUP CAP</b>	Co-60	<b>PATENT PENDING</b>	

Specifications subject to change without notice.



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