



EXRADIN CLASSIC FARMER-TYPE CHAMBER



Exradin Classic Farmer-type Chamber Model A19

CLASSIC FARMER-TYPE

Inherently waterproof and designed to fit existing plastic phantoms

- **DURABLE CONSTRUCTION, BUILT TO LAST**

Constructed of C552 Shonka air-equivalent conducting plastic, providing robust design and excellent conductivity. The shell, collector and guard are made of the same material, eliminating fragility of painted conductive layers found in many non-Standard Imaging ion chambers.

- **COMPLETELY WATERPROOF**

Inherently waterproof construction for use in most water phantoms, eliminating the need for additional protective coatings.

- **EXCELLENT DESIGN CHARACTERISTICS**

This chamber is fully and correctly guarded in the Exradin tradition of quality design to eliminate perturbation thereby ensuring excellent quality measurements.

Axially symmetric and uniform field lines and complete guarding ensure 100% A_{ion} collection efficiency.

- **FAST, OUTSTANDING MEASUREMENT CAPABILITY**

With its fast settling time after voltage changes, the Exradin Classic Farmer-type Chamber will expedite your measurements.



MAX 4000 Electrometer and Exradin Classic Farmer-type Chamber
(not shown to scale)



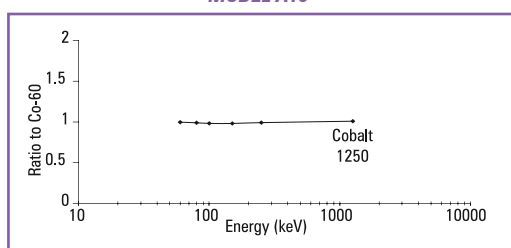
Features

Versatile, for absolute dosimetry calibrations in water, air or other phantom material

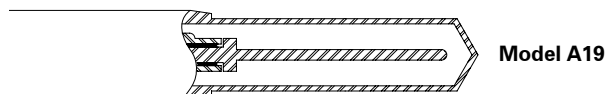
- For water phantom measurements, the inherently waterproof ion chamber vents through a flexible tube surrounding the triaxial cable equilibrating the air pressure within the ion chamber to the ambient room pressure
- Matching 2.8 mm thick Cobalt-60 build-up cap of C552 Shonka air-equivalent plastic is provided for air calibrations and measurements. Additional build-up caps of Delrin and brass are available
- The Classic Farmer-type Chamber Design assures the ion chamber will fit existing plastic phantom cavities and existing build-up caps
- Fits into standard cesium check sources
- Maintains the high quality internal design of the Exradin A12 Farmer-type Chamber



MODEL A19



Exceptionally Flat Characterization Curve



Model A19

EXRADIN CLASSIC FARMER-TYPE CHAMBER (REF 92734) SPECIFICATIONS

COLLECTING VOLUME	0.62 cc	MAXIMUM POLARIZING VOLTAGE	1000 volts
CENTROID OF COLLECTING VOLUME (from exterior tip)	12.8 mm	WATERPROOF	yes
OUTSIDE DIAMETER OF SHELL COLLECTING VOLUME	7.0 mm	INCLUDED BUILDUP CAP	Co-60
INSIDE DIAMETER OF SHELL COLLECTING VOLUME	6.0 mm	PHOTON ENERGY RANGE	30 kV to 20 MV
SHELL WALL THICKNESS	0.5 mm	ELECTRON ENERGY RANGE	4 MeV to 22 MeV
COLLECTOR DIAMETER	1.0 mm	PARAMETERS NEEDED TO CALCULATE N_{gas} FOR AAPM PROTOCOL TG21 OR N_0 FOR IAEA PROTOCOL TRS-277	
COLLECTOR LENGTH	21.6 mm	k_m	1.006
SHELL, COLLECTOR AND GUARD MATERIAL		k_{att} or A_{wall}	0.991
C552 Shonka air-equivalent plastic	1.76 g/cc	$k_m * k_{att}$	0.997
NOMINAL AIR KERMA CALIBRATION FACTOR*	5 R/nC	TO DETERMINE THE k_0 FACTOR FOR AAPM, PLEASE REVIEW TECHNICAL NOTE 4603 AVAILABLE ON THE STANDARD IMAGING WEBSITE: WWW.STANDARDIMAGING.COM	
NOMINAL LEAKAGE	< 10^{-15} amps		

* Nominal calibration factor for energies greater than 200 keV. Specifications subject to change without notice.



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