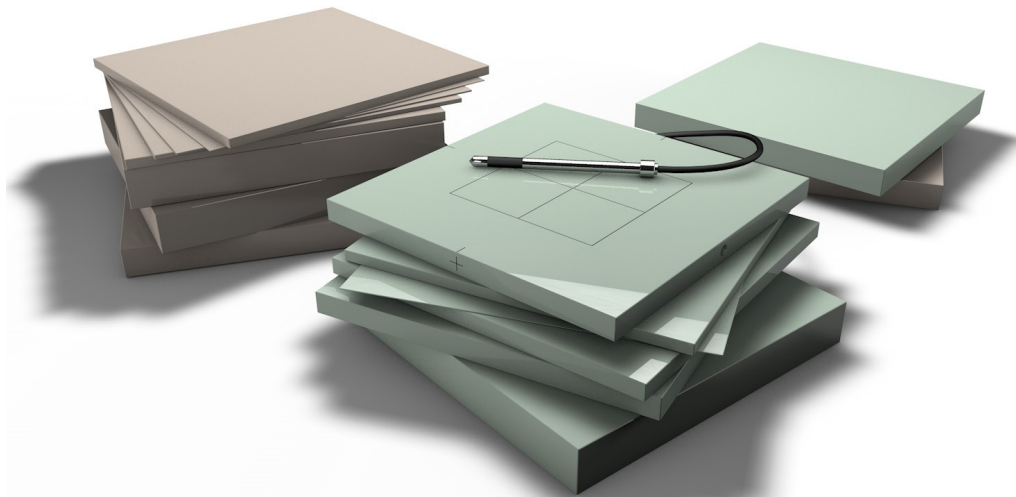


Plastic Water®

Model PW



CALIBRATE PHOTON AND ELECTRON BEAMS WITHIN 0.5% OF TRUE WATER DOSE

Unlike other water equivalent plastics on the market, Plastic Water® is flexible and resists breakage under impact. Plastic Water is the only calibration material available in 1 mm thicknesses. Original Plastic Water® is the only material which agrees with true water within 0.5% above 7 MeV. Custom cavities are available to accommodate any ion chamber on the market (simply provide detailed drawings when ordering).*

CIRS can simulate any tissue found in the human body and many phantoms contain multiple tissue substitutes. Water, however, is the most important reference material in Medical Physics. To accurately simulate water over all energy from 10 keV to 100 MeV with a singular solid materials is one of the more challenging tasks in the field of Tissue Simulation.

CIRS water equivalent materials are formulated to mimic within 1% or better for specific energy ranges:

Features

- Available in 1 mm thickness
- Easy to machine
- Durable
- Five year written warranty

Plastic Water® LR - 15 keV - 8 MeV

Use for such things as dose evaluation for low energy brachytherapy sources or CT dose verification.¹

Plastic Water® DT - 50 keV - 15 MeV*

Use for special applications requiring exposures to both diagnostic and therapeutic energies such as radiation therapy planning and dose verification in IMRT.²

Plastic Water® - The Original - 150 keV - 100 MeV

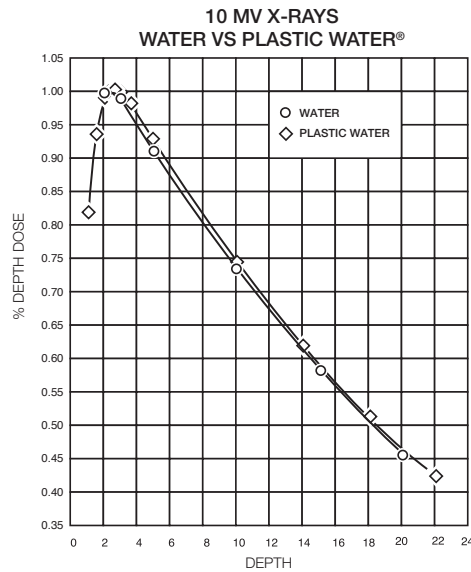
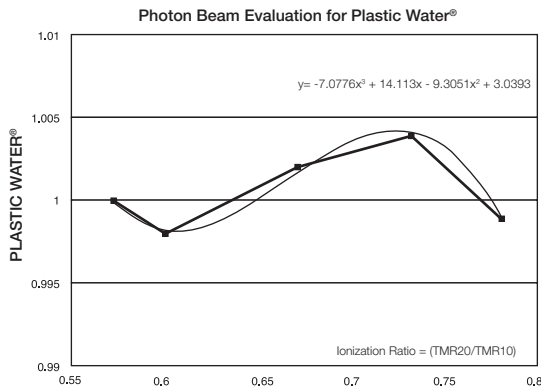
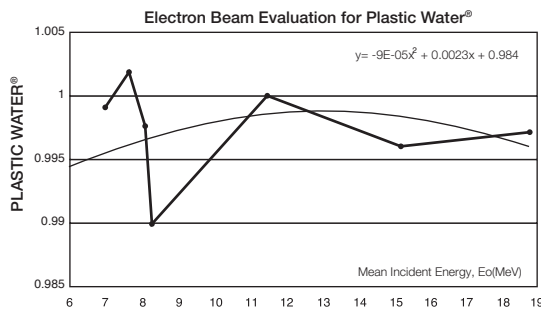
Permits calibration of photon and electron beams within 0.5% of true water dose. Ideal for routine beam constancy checks.³

900 Asbury Ave • Norfolk, Virginia 23513 • USA
Tel: 800.617.1177 • 757.855.2765 • Fax: 757.857.0523

WWW.CIRSINC.COM

CIRS

Tissue Simulation & Phantom Technology



References:

- Wallace, R.E., Evaluated phantom material for 125I and 103Pd dosimetry poster: SU-DD-EXH-12, AAPM Annual Meeting, Montreal, CANADA July, 2002.
- Ramaseshan, R., Kohli, K., Cao, F., & Heaton, R. (2008). A Dosimetric evaluation of Plastic Water-Diagnostic-Therapy (PWDT). Journal Of Applied Clinical Medical Physics, 9(2). doi:10.1120/jacmp.v9i2.2761
- Tello, V.M., Tailor, R.C., and Hanson, W.F. How water equivalent are water equivalent solid materials for output calibration of photon and electron beams? Medical Physics 22 (7), July 1995 pgs. 1177-1189.

SPECIFICATIONS

PLASTIC WATER® OPTIONS

DESCRIPTION	PART NO.	DIMENSIONS (CM)
Plastic Water® LR 15 keV - 8 MeV	PWLR-30-05 PWLR-30-10 PWLR-30-20	30 x 30 x 0.5 30 x 30 x 1 30 x 30 x 2
Plastic Water® DT 50 keV - 15 MeV	PWDT-30-01 PWDT-30-02 PWDT-30-03 PWDT-30-05 PWDT-30-10 PWDT-30-20 PWDT-30-30 PWDT-30-40 PWDT-30-50 PWDT-30-60	30 x 30 x 0.1 30 x 30 x 0.2 30 x 30 x 0.3 30 x 30 x 0.5 30 x 30 x 1 30 x 30 x 2 30 x 30 x 3 30 x 30 x 4 30 x 30 x 5 30 x 30 x 6
Plastic Water® DT w/ Chamber Cavity & Plug	*PWDT3020-CVXX-XX *PWDT-020-PLXX-XX	30 x 30 x 2 †
Plastic Water® The Original 150 keV - 100 MeV	PW-30-01 PW-30-02 PW-30-03 PW-30-05 PW-30-10 PW-30-20 PW-30-30 PW-30-40 PW-30-50 PW-30-60 PW-30-70 PW-40-01 PW-40-02 PW-40-03 PW-40-05 PW-40-10 PW-40-20 PW-40-30 PW-40-40 PW-40-50 PW-40-60 PW-40-70	30 x 30 x 0.1 30 x 30 x 0.2 30 x 30 x 0.3 30 x 30 x 0.5 30 x 30 x 1 30 x 30 x 2 30 x 30 x 3 30 x 30 x 4 30 x 30 x 5 30 x 30 x 6 30 x 30 x 7 40 x 40 x 0.1 40 x 40 x 0.2 40 x 40 x 0.3 40 x 40 x 0.5 40 x 40 x 1 40 x 40 x 2 40 x 40 x 3 40 x 40 x 4 40 x 40 x 5 40 x 40 x 6 40 x 40 x 7
Plastic Water® - The Original w/ Chamber Cavity & Plug	*PW3020-CVXX-XX *PW3020-PLXX-XX *PW4020-CVXX-XX *PW4020-PLXX-XX	30 x 30 x 2 † 40 x 40 x 2 †

PLASTIC WATER® INCLUDES

QTY	DESCRIPTION
1	Plastic Water® Slab or Set
1	User Guide
-	60 Month Warranty

PCW500 PLASTIC WATER SET -
30 x 30 CM SLAB PHANTOMS INCLUDES

(Available Only in Original Plastic Water®)

THICKNESS (CM)	QTY
0.1	1
0.2	2
0.5	1
1	1
2	2
4	1
5	2

Cavity Slab (PW3020-CVXX-XX) must be ordered separately.

† Exceptions: Slabs with ion chamber cavity CV51-2 are 1.7 cm thick; CV54-9 slabs are 1.4 cm thick.

* CHAMBER CAVITIES AND PLUGS

Plastic Water can be manufactured to accommodate most chambers on the market today. Refer to separate CIRS cavity and plug code list for available chamber cavities.

