ADCL SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994 and AAPM Criteria

UNIVERSITY OF WISCONSIN ACCREDITED DOIMETRY CALIBRATION LABORATORY
Room B1002, WIMR
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Version: 2025-11-18

I. Ionizing Radiation and Dosimetry

Parameter	Range	BMC[1, 2](±)	Reference Standard or Technique
Ionization Chambers/ Therapy Class –			
^{60}Co Air Kerma	Up to 150 cGy/min	1.5 %	NIST calibrated reference class ionization chambers.
^{60}Co Dose to Water	Up to 150 cGy/min	1.4 %	
^{137}Cs Air Kerma	Up to 20 cGy/min	1.6 %	
X-rays	(20 to 250) kVp	1.0 %	
Ionization Chambers/ Diagnostic Class –			
X-rays:			
Tungsten Anode	(20 to 250) kVp	1.9 %	NIST calibrated reference class ionization chambers.
Molybdenum Anode	(23 to 35) kVp	1.9 %	
Ionization Chambers/ Health Physics Radiation Protection –			NIST calibrated reference class ionization chambers.
^{60}Co Air Kerma	Up to 150 cGy/min	1.5 %	
^{137}Cs Air Kerma	Up to 20 cGy/min	1.6 %	
X-rays	(20 to 250) kVp	1.9 %	

Well-Type Brachytherapy Ionization Chambers – HDR: ^{192}Ir LDR: ^{192}Ir, ^{125}I, ^{103}Pd, ^{137}Cs, ^{131}Cs	(1 U = 1 μGym^2/hr) Up to 50 kU Up to 500 U	 2.8 % 2.7 %	NIST calibrated ^{137}Cs brachytherapy sources; reference class well-type ionization chambers calibrated against NIST calibrated sources for short-lived isotopes such as ^{192}Ir, ^{125}I, ^{131}Cs, and ^{103}Pd.
Radioactive Brachytherapy Sources – LDR:^{192}Ir, ^{125}I, ^{103}Pd, ^{137}Cs, ^{131}Cs	Up to 500 U	1.9 %	NIST calibrated ^{137}Cs brachytherapy sources, reference class well-type ionization chambers calibrated against NIST calibrated sources for short-lived isotopes such as ^{192}Ir, ^{125}I, ^{131}Cs, and ^{103}Pd.
Well-Type Intra-Vascular Ionization Chambers – ^{90}Sr Absorbed Dose	 Up to 200 mGy/s	 15 %	NIST traceable absorbed dose to water source calibrations
Well-Type Ionization Chambers	Up to 5 mGy/s	4.0 %	NIST traceable air kerma rate for electronic brachytherapy sources.
Electrometers – Charge (Coulomb) Current (Ampere)	 25 pC to 10,000 nC 1 pA to 1000 nA	 0.21 % 0.21 %	NIST traceable time, voltage, and resistance standards

[1] Best Measurement Capability (BMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing routine calibrations of nearly ideal

measurement standards or nearly ideal measuring equipment. BMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the BMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[2] In the statement of BMC, percentages are percentage of reading, unless otherwise indicated.

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

Certificate of Accreditation

This is to certify that

University of Wisconsin ADCL

has successfully fulfilled all requirements for each specific area of accreditation shown in the Scope of Accreditation and is hereby acknowledged to be an

Accredited Dosimetry Calibration Laboratory

by agreement of the AAPM Board of Directors for the term beginning on the first day of

January 1, 2026, *and ending* *December 31, 2029*

Jeffrey V Siebers
Chair, Calibration Laboratory Accreditation Subcommittee

M. Mahesh
AAPM President

Ronald E. Tosh
Chair, Calibration Laboratory Accreditation Executive Committee

AAPM Executive Director

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