

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

UNIVERSITY OF WISCONSIN ACCREDITED DOIMETRY CALIBRATION LABORATORY
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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 ⁶⁰ Co Dose to Water ¹³⁷ Cs Air Kerma X-rays | Up to 150 cGy/min Up to 150 cGy/min Up to 20 cGy/min (20 to 250) kVp | 1.5 % 1.4 % 1.6 % 1.0 % | NIST calibrated reference class ionization chambers. |
| Ionization Chambers/ Diagnostic Class – X-rays: Tungsten Anode Molybdenum Anode | (20 to 250) kVp (23 to 35) kVp | 1.9 % 1.9 % | NIST calibrated reference class ionization chambers. |
| Ionization Chambers/ Health Physics Radiation Protection – ⁶⁰ Co Air Kerma ¹³⁷ Cs Air Kerma X-rays | Up to 150 cGy/min Up to 20 cGy/min (20 to 250) kVp | 1.5 % 1.6 % 1.9 % | NIST calibrated reference class ionization chambers. |

| | | | |
|--|---|--------------------|---|
| Well-Type Brachytherapy Ionization Chambers – HDR: ^{192}Ir LDR: ^{192}Ir , ^{125}I , ^{103}Pd , ^{137}Cs , ^{131}Cs | (1 U = 1 $\mu\text{Gy}^2/\text{hr}$) 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

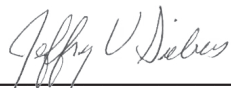
University of Wisconsin ADCL

*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*



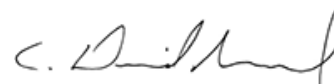
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