



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

NEWAGE TESTING INSTRUMENTS, INC.
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CALIBRATION

Valid To: July 31, 2027

Certificate Number: 1734.03

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the organization's compliance with R205 – A2LA's Calibration Program Requirements), accreditation is granted to this laboratory to perform the following calibrations^{1,6}:

I. Mechanical

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Indirect Verification of MT91 Hardness Testers ³	HRC: > 60 HRC (40 to 59) HRC (20 to 39) HRC	0.35 HRC 0.37 HRC 0.44 HRC	Newage Testing Instruments internal calibration procedure CP-15
Indirect Verification of Rockwell and Rockwell Superficial Hardness Testers ³	HRA: High Medium Low HRBW: High Medium Low HRC: High Medium Low HRD: High Medium Low	0.21 HRA 0.20 HRA 0.43 HRA 0.50 HRBW 0.67 HRBW 1.1 HRBW 0.32 HRC 0.33 HRC 0.39 HRC 0.12 HRD 0.28 HRD 0.15 HRD	ASTM E18, ISO 6508

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Indirect Verification of Rockwell and Rockwell Superficial Hardness Testers ³ (cont)	HREW: High Medium Low	0.50 HREW 0.19 HREW 0.22 HREW	ASTM E18, ISO 6508
	HRFW: High Medium Low	0.47 HRFW 0.46 HRFW 0.46 HRFW	
	HRGW: High Medium Low	0.29 HRGW 0.25 HRGW 0.80 HRGW	
	HRHW: High Low	0.37 HRHW 0.43 HRHW	
	HRKW: High Medium Low	0.37 HRKW 0.39 HRKW 0.51 HRKW	
	HRRW: High Low	0.23 HRRW 0.34 HRRW	
	HR15N: High Medium Low	0.22 HR15N 0.24 HR15N 0.48 HR15N	
	HR15TW: High Medium Low	0.43 HR15TW 0.28 HR15TW 0.28 HR15TW	
	HR30N: High Medium Low	0.52 HR30N 0.53 HR30N 0.37 HR30N	

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Indirect Verification of Rockwell and Rockwell Superficial Hardness Testers ³ (cont)	HR30TW: High Medium Low HR45N: High Medium Low HR45TW: High Medium Low	0.29 HR30TW 0.32 HR30TW 0.58 HR30TW 0.18 HR45N 0.34 HR45N 0.50 HR45N 0.40 HR45TW 0.44 HR45TW 0.75 HR45TW	ASTM E18, ISO 6508
Direct Verification of Rockwell Hardness Testers – Verification of the Test Force Verification of the Depth-Measuring Device	(3 to 150) kgf (0 to 260) µm	0.053 % of full scale 0.14 µm	ASTM E18, ISO 6508 Verification of the test force is by load cell per the method of ASTM E4
Indirect Verification of Brinell Hardness Testers ³ – HBW 10/3000/10 HBW 10/1500/10 HBW 10/1000/10 HBW 10/500/10 HBW 5/750/10 HBW 5/250/10 HBW 2.5/187.5/10	(96 to 372) HBW (373 to 650) HBW (48 to 186) HBW (187 to 327) HBW (96 to 372) HBW (373 to 650) HBW (16 to 61) HBW (62 to 109) HBW (96 to 372) HBW (373 to 650) HBW (32 to 124) HBW (125 to 218) HBW (96 to 372) HBW (373 to 650) HBW	2.1 HBW 5.9 HBW 1.5 HBW 2.7 HBW 1.0 HBW 2.2 HBW 0.5 HBW 1.1 HBW 1.3 HBW 8.8 HBW 1.2 HBW 2.1 HBW 2.9 HBW 18 HBW	ASTM E10, E103; ISO 6506

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
<p>Direct Verification of Brinell Hardness Testers³ –</p> <p>Verification of the Test Force</p> <p>Verification of the Device for Measuring Indentation Diameter</p>	<p>(125 to 3000) kgf</p> <p>(0 to 6) mm</p>	<p>0.053 % of full scale</p> <p>2.1 µm</p>	<p>ASTM E10, E110; ISO 6506</p> <p>Verification of the test force is by load cell per the method of ASTM E4</p> <p>By stage micrometer</p>
<p>Indirect Verification of Microindentation Hardness Testers³ – (Knoop and Vickers)</p>	<p>Vickers (≤ 1 kgf): (100 to 240) HV (240 to 600) HV > 600 HV</p> <p>Vickers (> 1 kgf): (100 to 240) HV (240 to 600) HV > 600 HV</p> <p>Knoop: (100 to 250) HK (250 to 650) HK > 650 HK</p>	<p>3.9 HV 7.5 HV 11 HV</p> <p>2.9 HV 7.4 HV 14 HV</p> <p>5.5 HK 15 HK 15 HK</p>	<p>ASTM E92, ISO 6507</p>
<p>Direct Verification of Microindentation Hardness Testers³ – (Vickers and Knoop)</p> <p>Verification of the Test Force</p> <p>Verification of the Device for Measuring Indentation Diagonals</p>	<p>(10 to 2000) gf</p> <p>(0 to 200) µm</p>	<p>0.053 % of full scale</p> <p>0.63 µm</p>	<p>ASTM E92, ISO 6507</p> <p>Verification of the test force is by load cell per the method of ASTM E92</p> <p>By stage micrometer</p>

¹ This laboratory offers commercial calibration service and field calibration service.

- ² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs 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 CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.
- ³ Field calibration service is available for this. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.
- ⁴ Indenters are verified by performance only. The direct verifications provided are considered partial due to the exclusion of the verification of the indenter.
- ⁵ For Rockwell scales using ball indenters, both steel (S) and tungsten carbide (W) are used. CMCs are reflected with the tungsten carbide balls only.
- ⁶ This scope meets A2LA's *P112 Flexible Scope Policy*.



Accredited Laboratory

A2LA has accredited

NEWAGE TESTING INSTRUMENTS, INC.

Largo, FL

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 27th day of October 2025.

A blue ink signature of Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1734.03
Valid to July 31, 2027

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.