



**National Voluntary  
Laboratory Accreditation Program**



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005**

**Gilmore Diamond Calibration Laboratory**

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**CALIBRATION LABORATORIES**

**NVLAP LAB CODE 200538-0**

Scope Revised: 2009-07-21

**MECHANICAL**

*NVLAP Code:* 20/M13

Calibration of Rockwell Indenters, HRA, HRC, HRD, and HRN Scales  
Diamond

<i>Measured Quantity</i>	<i>Best Uncertainty</i> ( $\pm$ ) <sup>note 1,2</sup>	<i>Remarks</i>
Mean Cone Angle	3 minutes	
Mean Tip Radius	0.002 mm	
Single Tip Radius	0.002 mm	
Diamond Axis Inclination	5 minutes	
Straightness of Polished Cone	0.0008 mm	
Indenter Performance	0.04 HRC	HRC 60 range
	0.04 HRC	HRC 55 range
	0.08 HRC	HRC 45 range
	0.09 HRC	HRC 25 range
	0.07 HRA	HRA 80 range
	0.08 HR15N	HR15N 90 range
	0.03 HR30N	HR30N 65 range
	0.22 HR30N	HR30N 45 range
	0.14 HR45N	HR45N 43 range
0.04 HR45N	HR45N 25 range	

2009-01-01 through 2009-12-31

*Effective dates*

*Sally S. Bruce*

*For the National Institute of Standards and Technology*



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Ball

<i>Measured Quantity</i>	<i>Best Uncertainty (<math>\pm</math>)<sup>note 1,2</sup></i>	<i>Remarks</i>
Ball Protrusion	0.002 mm	
Indenter Performance	0.35 HRB	1/16 " Ball Penetrator
	0.35 HRE	1/8 " Ball Penetrator

1. Represents an expanded uncertainty using a coverage factor,  $k = 2$ , at an approximate level of confidence of 95 %.
2. All calibrations performed compliant with ASTM E18 and/or ISO 6508.

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