



**National Voluntary  
Laboratory Accreditation Program**



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

**North Carolina Standards Laboratory**  
 4040 District Drive / 1051 Mail Service Center  
 Raleigh, NC 27699-1051  
 Ms. Sharon Woodard  
 Phone: 919-733-4411 x213 Fax: 919-733-8804  
 E-mail: sharon.woodard@ncagr.gov  
 URL: <http://www.ncagr.gov/standard>

**CALIBRATION LABORATORIES**

**NVLAP LAB CODE 200495-0**  
 Scope Revised: 2012-01-31

*NVLAP Code:* 20/A01                      ANSI/NCSL Z540-1-1994; Part 1                      Compliant

**DIMENSIONAL**

*NVLAP Code:* 20/D05  
 Length and Rigid Rules

<i>Range in inches</i>	<i>Best Uncertainty (±) in inches<sup>note 1</sup></i>	<i>Remarks</i>
0 to 1	0.0023	Rigid Rules
0 to 2	0.0023	Rigid Rules
0 to 3	0.0023	Rigid Rules
0 to 4	0.0023	Rigid Rules
0 to 5	0.0023	Rigid Rules
0 to 6	0.0023	Rigid Rules
0 to 7	0.0023	Rigid Rules
0 to 8	0.0023	Rigid Rules
0 to 9	0.0023	Rigid Rules
0 to 10	0.0023	Rigid Rules
0 to 11	0.0023	Rigid Rules
0 to 12	0.0023	Rigid Rules
0 to 24	0.0032	Rigid Rules
0 to 36	0.0032	Rigid Rules
0 to 48	0.0038	Rigid Rules
0 to 60	0.0043	Rigid Rules

2011-04-01 through 2012-03-31

*Effective dates*

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<i>Range in inches</i>	<i>Best Uncertainty (±) in inches<sup>note 1</sup></i>	<i>Remarks</i>
0 to 72	0.0043	Rigid Rules
Lottery Ball Pass Through Gauge	0.0069	

<i>Range in mm</i>	<i>Best Uncertainty (±) in mm<sup>note 1</sup></i>	<i>Remarks</i>
0 to 10	0.072	Rigid Rules
0 to 20	0.072	Rigid Rules
0 to 30	0.072	Rigid Rules
0 to 40	0.072	Rigid Rules
0 to 50	0.072	Rigid Rules
0 to 60	0.072	Rigid Rules
0 to 70	0.072	Rigid Rules
0 to 80	0.072	Rigid Rules
0 to 90	0.072	Rigid Rules
0 to 100	0.072	Rigid Rules
0 to 200	0.072	Rigid Rules
0 to 300	0.072	Rigid Rules
0 to 400	0.072	Rigid Rules
0 to 500	0.072	Rigid Rules
0 to 600	0.072	Rigid Rules
0 to 700	0.072	Rigid Rules
0 to 800	0.072	Rigid Rules
0 to 900	0.072	Rigid Rules
0 to 1000	0.072	Rigid Rules

**NVLAP Code:** 20/D13  
Surveying Tapes

<i>Range in ft</i>	<i>Best Uncertainty (±) in ft<sup>note 1</sup></i>	<i>Remarks</i>
0 to 1	0.00026	Bench Method
0 to 2	0.00026	Bench Method
0 to 3	0.00026	Bench Method

<i>Range in ft</i>	<i>Best Uncertainty (±) in ft<sup>note 1</sup></i>	<i>Remarks</i>
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0 to 4	0.00026	Bench Method
0 to 5	0.00026	Bench Method
0 to 6	0.00026	Bench Method
0 to 7	0.00026	Bench Method
0 to 8	0.00026	Bench Method
0 to 9	0.00026	Bench Method
0 to 10	0.00026	Bench Method
0 to 11	0.00026	Bench Method
0 to 12	0.00026	Bench Method
0 to 13	0.00026	Bench Method
0 to 14	0.00026	Bench Method
0 to 15	0.00026	Bench Method
0 to 16	0.00026	Bench Method
17 to 32	0.00034	Bench Method
33 to 48	0.00041	Bench Method
49 to 64	0.00047	Bench Method
65 to 80	0.00052	Bench Method
81 to 96	0.00057	Bench Method
97 to 112	0.00062	Bench Method

<b><i>Range in m</i></b>	<b><i>Best Uncertainty (±) in mm <sup>note 1</sup></i></b>	<b><i>Remarks</i></b>
0 to 0.1	0.066	Bench Method
0 to 0.2	0.066	Bench Method
0 to 0.3	0.066	Bench Method
0 to 0.4	0.066	Bench Method
0 to 0.5	0.066	Bench Method
0 to 0.6	0.066	Bench Method
0 to 0.7	0.066	Bench Method
0 to 0.8	0.066	Bench Method
0 to 0.9	0.066	Bench Method
0 to 1	0.066	Bench Method
0 to 2	0.066	Bench Method
0 to 3	0.066	Bench Method

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<i>Range in m</i>	<i>Best Uncertainty (±) in mm <sup>note 1</sup></i>	<i>Remarks</i>
0 to 4	0.066	Bench Method
0 to 5	0.066	Bench Method
6 to 10	0.11	Bench Method
11 to 15	0.14	Bench Method
16 to 20	0.16	Bench Method
21 to 25	0.18	Bench Method
26 to 30	0.20	Bench Method

## MECHANICAL

NVLAP Code: 20/M08  
Mass - Metric

<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
250 kg	0.60 g	Echelon II
200 kg	0.54 g	Echelon II
100 kg	0.37 g	Echelon II
50 kg	31 mg	Echelon II
30 kg	23 mg	Echelon II
25 kg	18 mg	Echelon II
20 kg	17 mg	Echelon II
10 kg	10 mg	Echelon II
5 kg	2.3 mg	Echelon II
3 kg	1.3 mg	Echelon II
2 kg	0.91 mg	Echelon II
1 kg	74 µg	Echelon II
500 g	92 µg	Echelon II
300 g	80 µg	Echelon II
200 g	75 µg	Echelon II
100 g	29 µg	Echelon II
50 g	16 µg	Echelon II
30 g	12 µg	Echelon II
20 g	10 µg	Echelon II
10 g	6.7 µg	Echelon II

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<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
5 g	3.3 µg	Echelon II
3 g	2.7 µg	Echelon II
2 g	2.4 µg	Echelon II
1 g	2.3 µg	Echelon II
500 mg	2.0 µg	Echelon II
300 mg	0.98 µg	Echelon II
200 mg	0.94 µg	Echelon II
100 mg	1.0 µg	Echelon II
50 mg	0.81 µg	Echelon II
30 mg	0.74 µg	Echelon II
20 mg	0.72 µg	Echelon II
10 mg	0.75 µg	Echelon II
5 mg	0.67 µg	Echelon II
3 mg	0.65 µg	Echelon II
2 mg	0.64 µg	Echelon II
1 mg	0.65 µg	Echelon II

Mass – Avoirdupois

2500 lb	25 g	Echelon II
2000 lb	17 g	Echelon II
1000 lb	1.1 g	Echelon II
500 lb	0.51 g	Echelon II
100 lb	56 mg	Echelon II
50 lb	32 mg	Echelon II
30 lb	21 mg	Echelon II
25 lb	15 mg	Echelon II
20 lb	13 mg	Echelon II
10 lb	8.5 mg	Echelon II
5 lb	1.0 mg	Echelon II
4 lb	0.50 mg	Echelon II
3 lb	0.67 mg	Echelon II
2 lb	0.40 mg	Echelon II

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<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
1 lb	0.22 mg	Echelon II
0.5 lb	0.12 mg	Echelon II
0.3 lb	0.10 mg	Echelon II
0.2 lb	47 µg	Echelon II
0.1 lb	29 µg	Echelon II
0.05 lb	16 µg	Echelon II
0.03 lb	12 µg	Echelon II
0.02 lb	7.9 µg	Echelon II
0.01 lb	5.4 µg	Echelon II
0.005 lb	3.9 µg	Echelon II
0.003 lb	3.3 µg	Echelon II
0.002 lb	3.2 µg	Echelon II
0.001 lb	3.4 µg	Echelon II
4 oz	0.27 mg	Echelon II
2 oz	0.12 mg	Echelon II
1 oz	63 µg	Echelon II
1/2 oz	35 µg	Echelon II
1/4 oz	17 µg	Echelon II
1/8 oz	8.5 µg	Echelon II
1/16 oz	5.3 µg	Echelon II
1/32 oz	3.6 µg	Echelon II
Mass – Metric		
500 kg	1.4 g	Echelon III
250 kg	0.97 g	Echelon III
200 kg	0.93 g	Echelon III
100 kg	0.84 g	Echelon III
50 kg	41 mg	Echelon III
30 kg	39 mg	Echelon III
25 kg	43 mg	Echelon III
20 kg	36 mg	Echelon III
10 kg	35 mg	Echelon III

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<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
5 kg	1.4 mg	Echelon III
3 kg	1.3 mg	Echelon III
2 kg	1.3 mg	Echelon III
1 kg	1.2 mg	Echelon III
500 g	1.2 mg	Echelon III
300 g	1.2 mg	Echelon III
200 g	95 µg	Echelon III
100 g	96 µg	Echelon III
50 g	94 µg	Echelon III
30 g	93 µg	Echelon III
20 g	93 µg	Echelon III
10 g	93 µg	Echelon III
5 g	10 µg	Echelon III
3 g	9.7 µg	Echelon III
2 g	9.8 µg	Echelon III
1 g	9.7 µg	Echelon III
500 mg	9.6 µg	Echelon III
300 mg	9.6 µg	Echelon III
200 mg	9.6 µg	Echelon III
100 mg	9.6 µg	Echelon III
50 mg	9.6 µg	Echelon III
30 mg	9.6 µg	Echelon III
20 mg	9.6 µg	Echelon III
10 mg	9.6 µg	Echelon III
5 mg	9.6 µg	Echelon III
3 mg	9.6 µg	Echelon III
2 mg	9.6 µg	Echelon III
1 mg	9.6 µg	Echelon III
Lottery Balls	3.9 mg	Echelon III
Mass – Avoirdupois		
6000 lb	40 g	Echelon III

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<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
5500 lb	40 g	Echelon III
5000 lb	40 g	Echelon III
4000 lb	36 g	Echelon III
3000 lb	36 g	Echelon III
2500 lb	36 g	Echelon III
2000 lb	31 g	Echelon III
1000 lb	1.5 g	Echelon III
500 lb	0.94 g	Echelon III
100 lb	60 mg	Echelon III
50 lb	49 mg	Echelon III
30 lb	42 mg	Echelon III
25 lb	40 mg	Echelon III
20 lb	38 mg	Echelon III
10 lb	10 mg	Echelon III
5 lb	1.4 mg	Echelon III
4 lb	1.4 mg	Echelon III
3 lb	1.3 mg	Echelon III
2 lb	1.3 mg	Echelon III
1 lb	1.3 mg	Echelon III
0.5 lb	1.2 mg	Echelon III
0.3 lb	90 µg	Echelon III
0.2 lb	96 µg	Echelon III
0.1 lb	94 µg	Echelon III
0.05 lb	93 µg	Echelon III
0.03 lb	92 µg	Echelon III
0.02 lb	92 µg	Echelon III
0.01 lb	92 µg	Echelon III
0.005 lb	92 µg	Echelon III
0.003 lb	9.9 µg	Echelon III
0.002 lb	9.9 µg	Echelon III
0.001 lb	10 µg	Echelon III

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<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
4 oz	0.11 mg	Echelon III
2 oz	90 µg	Echelon III
1 oz	90 µg	Echelon III
1/2 oz	90 µg	Echelon III
1/4 oz	90 µg	Echelon III
1/8 oz	10 µg	Echelon III
1/16 oz	10 µg	Echelon III
1/32 oz	9.9 µg	Echelon III

### Weight Carts

6000 lb	0.12 lb	Echelon III
5500 lb	0.12 lb	Echelon III
5000 lb	0.13 lb	Echelon III
4000 lb	0.12 lb	Echelon III
3500 lb	0.12 lb	Echelon III
3000 lb	0.13 lb	Echelon III
2500 lb	0.13 lb	Echelon III
2000 lb	0.12 lb	Echelon III

### NVLAP Code: 20/M12

#### Volume

<i>Nominal Volume</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
1500 gal	53 in <sup>3</sup>	Transfer Method
1000 gal	36 in <sup>3</sup>	Transfer Method
500 gal	19 in <sup>3</sup>	Transfer Method
100 gal	2.7 in <sup>3</sup>	Transfer Method
50 gal	1.8 in <sup>3</sup>	Transfer Method
25 gal	1.0 in <sup>3</sup>	Transfer Method
5 gal	0.41 in <sup>3</sup>	Transfer Method
1 gal	0.41 in <sup>3</sup>	Transfer Method
20 L	0.42 in <sup>3</sup>	Transfer Method

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<i>Nominal Volume</i>	<i>Best Uncertainty</i> ( $\pm$ ) <sup>note 1</sup>	<i>Remarks</i>
5 gal	0.84 in <sup>3</sup>	Transfer Method (Field)
1 gal	0.84 in <sup>3</sup>	Transfer Method (Field)
500 gal	20 in <sup>3</sup>	LPG Transfer Method
100 gal	4.3 in <sup>3</sup>	LPG Transfer Method
50 gal	3.0 in <sup>3</sup>	LPG Transfer Method
25 gal	2.5 in <sup>3</sup>	LPG Transfer Method
100 gal	0.90 in <sup>3</sup>	Gravimetric Method
50 gal	0.71 in <sup>3</sup>	Gravimetric Method
25 gal	0.54 in <sup>3</sup>	Gravimetric Method
15 gal	0.30 in <sup>3</sup>	Gravimetric Method
5 gal test measure	0.15 in <sup>3</sup>	Gravimetric Method
1 gal test measure	0.12 in <sup>3</sup>	Gravimetric Method
20 L test measure	2.7 mL	Gravimetric Method
100 mL flask	0.034 mL	Gravimetric Method
1 qt flask	0.27 mL	Gravimetric Method
1 gill flask	0.059 mL	Gravimetric Method
100 gal slicker	0.30 in <sup>3</sup>	Gravimetric Method
50 gal slicker	0.21 in <sup>3</sup>	Gravimetric Method
25 gal slicker	0.15 in <sup>3</sup>	Gravimetric Method
15 gal slicker	0.077 in <sup>3</sup>	Gravimetric Method
5 gal slicker	0.040 in <sup>3</sup>	Gravimetric Method
1 gal slicker	0.019 in <sup>3</sup>	Gravimetric Method
20 L slicker	0.66 mL	Gravimetric Method
30 gal	1.2 in <sup>3</sup>	Small Volume Prover Gravimetric Method
20 gal	0.77 in <sup>3</sup>	Small Volume Prover Gravimetric Method
15 gal	0.45 in <sup>3</sup>	Small Volume Prover Gravimetric Method

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1. Represents an expanded uncertainty using a coverage factor,  $k = 2$ , at an approximate level of confidence of 95 %.

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A handwritten signature in cursive script that reads "David E. Alderson".

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