



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Oklahoma Bureau of Standards

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CALIBRATION LABORATORIES

NVLAP LAB CODE 200396-0

NVLAP Code: 20/A01

ANSI/NCSL Z540-1-1994; Part 1

Compliant

DIMENSIONAL

NVLAP Code: 20/D13

Surveying Rods and Tapes

<i>Range in feet</i>	<i>Best Uncertainty (\pm) in inches ^{note 1}</i>	<i>Remarks</i>
0 to 1	0.0052	Tapes – Bench Method
0 to 2	0.0052	Tapes – Bench Method
0 to 3	0.0052	Tapes – Bench Method
0 to 4	0.0052	Tapes – Bench Method
0 to 5	0.0052	Tapes – Bench Method
0 to 6	0.0052	Tapes – Bench Method
0 to 7	0.0052	Tapes – Bench Method
0 to 8	0.0052	Tapes – Bench Method
0 to 9	0.0052	Tapes – Bench Method
0 to 10	0.0053	Tapes – Bench Method
0 to 20	0.0099	Tapes – Bench Method
0 to 30	0.014	Tapes – Bench Method
0 to 40	0.019	Tapes – Bench Method
0 to 50	0.023	Tapes – Bench Method
0 to 60	0.028	Tapes – Bench Method
0 to 70	0.032	Tapes – Bench Method

2009-01-01 through 2009-12-31

Effective dates

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0 to 80	0.037	Tapes – Bench Method
0 to 90	0.041	Tapes – Bench Method
0 to 100	0.046	Tapes – Bench Method
0 to 110	0.050	Tapes – Bench Method
0 to 120	0.055	Tapes – Bench Method
0 to 130	0.059	Tapes – Bench Method
0 to 140	0.064	Tapes – Bench Method
0 to 150	0.068	Tapes – Bench Method
> 150	0.068 ^{note 2}	Tapes – Bench Method

MECHANICAL

NVLAP Code: 20/M08

Mass - Metric

Range	Best Uncertainty (\pm) ^{note 1}	Remarks
20 kg	7.7 mg	Echelon I
10 kg	0.75 mg	Echelon I
5 kg	0.50 mg	Echelon I
3 kg	0.42 mg	Echelon I
2 kg	0.40 mg	Echelon I
1 kg	53 μ g	Echelon I
500 g	27 μ g	Echelon I
300 g	18 μ g	Echelon I
200 g	13 μ g	Echelon I
100 g	11 μ g	Echelon I
50 g	6.1 μ g	Echelon I
30 g	4.1 μ g	Echelon I
20 g	3.3 μ g	Echelon I
10 g	3.2 μ g	Echelon I
5 g	1.7 μ g	Echelon I
3 g	1.2 μ g	Echelon I
2 g	0.87 μ g	Echelon I
1 g	0.83 μ g	Echelon I

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500 mg	0.59 µg	Echelon I
300 mg	0.47 µg	Echelon I
200 mg	0.44 µg	Echelon I
100 mg	0.50 µg	Echelon I
50 mg	0.27 µg	Echelon I
30 mg	0.18 µg	Echelon I
20 mg	0.14 µg	Echelon I
10 mg	0.14 µg	Echelon I
5 mg	0.090 µg	Echelon I
3 mg	0.090 µg	Echelon I
2 mg	0.080 µg	Echelon I
1 mg	0.10 µg	Echelon I
1200 kg	12 g	Echelon II
750 kg	11 g	Echelon II
500 kg	2.6 g	Echelon II
250 kg	2.8 g	Echelon II
200 kg	0.43 g	Echelon II
100 kg	0.42 g	Echelon II
50 kg	30 mg	Echelon II
30 kg	11 mg	Echelon II
20 kg	10 mg	Echelon II
10 kg	0.93 mg	Echelon II
5 kg	0.75 mg	Echelon II
3 kg	0.63 mg	Echelon II
2 kg	0.71 mg	Echelon II
1 kg	87 µg	Echelon II
500 g	72 µg	Echelon II
300 g	57 µg	Echelon II
200 g	55 µg	Echelon II
100 g	24 µg	Echelon II
50 g	23 µg	Echelon II
30 g	20 µg	Echelon II
20 g	16 µg	Echelon II
10 g	7.3 µg	Echelon II

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5 g	4.9 µg	Echelon II
3 g	3.5 µg	Echelon II
2 g	3.6 µg	Echelon II
1 g	1.4 µg	Echelon II
500 mg	1.4 µg	Echelon II
300 mg	1.0 µg	Echelon II
200 mg	0.97 µg	Echelon II
100 mg	0.81 µg	Echelon II
50 mg	0.58 µg	Echelon II
30 mg	0.29 µg	Echelon II
20 mg	0.26 µg	Echelon II
10 mg	0.34 µg	Echelon II
5 mg	0.24 µg	Echelon II
3 mg	0.27 µg	Echelon II
2 mg	0.24 µg	Echelon II
1 mg	0.31 µg	Echelon II

Mass - Avoirdupois

Range	Best Uncertainty (±) ^{note 1}	Remarks
2500 lb	0.025 lb	Echelon II
2000 lb	0.025 lb	Echelon II
1000 lb	0.0016 lb	Echelon II
500 lb	0.00097 lb	Echelon II
300 lb	0.00095 lb	Echelon II
200 lb	0.00094 lb	Echelon II
100 lb	67 µlb	Echelon II
50 lb	26 µlb	Echelon II
25 lb	4.5 µlb	Echelon II
20 lb	2.3 µlb	Echelon II
10 lb	1.8 µlb	Echelon II
5 lb	1.6 µlb	Echelon II
3 lb	0.60 µlb	Echelon II
2 lb	0.28 µlb	Echelon II
1 lb	0.21 µlb	Echelon II
0.5 lb	0.17 µlb	Echelon II

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0.3 lb	0.14 µlb	Echelon II
0.2 lb	0.071 µlb	Echelon II
0.1 lb	0.064 µlb	Echelon II
0.05 lb	0.057 µlb	Echelon II
0.03 lb	0.053 µlb	Echelon II
0.02 lb	0.024 µlb	Echelon II
0.01 lb	0.017 µlb	Echelon II
0.005 lb	0.012 µlb	Echelon II
0.003 lb	0.0095 µlb	Echelon II
0.002 lb	0.0059 µlb	Echelon II
0.001 lb	0.0052 µlb	Echelon II
0.0005 lb	0.0044 µlb	Echelon II
0.0003 lb	0.0033 µlb	Echelon II
0.0002 lb	0.0032 µlb	Echelon II
0.0001 lb	0.0017 µlb	Echelon II
0.00005 lb	0.0014 µlb	Echelon II
0.00003 lb	0.0017 µlb	Echelon II
0.00002 lb	0.00077 µlb	Echelon II
0.00001 lb	0.00054 µlb	Echelon II
0.000005 lb	0.00054 µlb	Echelon II
0.000003 lb	0.00059 µlb	Echelon II
0.000002 lb	0.00069 µlb	Echelon II
0.000001 lb	0.00069 µlb	Echelon II

Mass – Metric

Range	Best Uncertainty (\pm) ^{note 1}	Remarks
1200 kg	14 g	Echelon III
1000 kg	13 g	Echelon III
750 kg	12 g	Echelon III
500 kg	4.3 g	Echelon III
250 kg	4.2 g	Echelon III
200 kg	3.7 g	Echelon III
100 kg	1.8 g	Echelon III
50 kg	1.3 g	Echelon III
30 kg	0.16 g	Echelon III

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25 kg	0.15 g	Echelon III
20 kg	0.15 g	Echelon III
10 kg	0.14 g	Echelon III
5 kg	8.2 mg	Echelon III
3 kg	6.9 mg	Echelon III
2 kg	6.4 mg	Echelon III
1 kg	6.0 mg	Echelon III
500 g	5.9 mg	Echelon III
300 g	3.7 mg	Echelon III
200 g	0.31 mg	Echelon III
100 g	0.17 mg	Echelon III
50 g	0.13 mg	Echelon III
30 g	0.12 mg	Echelon III
20 g	0.12 mg	Echelon III
10 g	0.10 mg	Echelon III
5 g	0.10 mg	Echelon III
3 g	0.10 mg	Echelon III
2 g	0.10 mg	Echelon III
1 g	0.10 mg	Echelon III
500 mg	0.10 mg	Echelon III
300 mg	0.10 mg	Echelon III
200 mg	61 µg	Echelon III
100 mg	63 µg	Echelon III
50 mg	42 µg	Echelon III
30 mg	42 µg	Echelon III
20 mg	42 µg	Echelon III
10 mg	41 µg	Echelon III
5 mg	32 µg	Echelon III
3 mg	32 µg	Echelon III
2 mg	32 µg	Echelon III
1 mg	33 µg	Echelon III

Mass – Avoirdupois

Range	Best Uncertainty (\pm)^{note 1}	Remarks
2500 lb	0.032 lb	Echelon III

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2000 lb	0.029 lb	Echelon III
1500 lb	0.028 lb	Echelon III
1250 lb	0.026 lb	Echelon III
1000 lb	0.0094 lb	Echelon III
500 lb	0.0082 lb	Echelon III
300 lb	0.0053 lb	Echelon III
250 lb	0.0041 lb	Echelon III
200 lb	0.0041 lb	Echelon III
125 lb	0.0033 lb	Echelon III
100 lb	0.00059 lb	Echelon III
50 lb	0.00034 lb	Echelon III
30 lb	0.00032 lb	Echelon III
25 lb	0.00032 lb	Echelon III
20 lb	0.00031 lb	Echelon III
15 lb	0.00031 lb	Echelon III
10 lb	18 µlb	Echelon III
5 lb	15 µlb	Echelon III
4 lb	15 µlb	Echelon III
3 lb	14 µlb	Echelon III
2 lb	13 µlb	Echelon III
1 lb	8.2 µlb	Echelon III
0.5 lb	8.2 µlb	Echelon III
0.3 lb	0.56 µlb	Echelon III
0.2 lb	0.38 µlb	Echelon III
0.1 lb	0.29 µlb	Echelon III
0.05 lb	0.27 µlb	Echelon III
0.03 lb	0.27 µlb	Echelon III
0.02 lb	0.24 µlb	Echelon III
0.01 lb	0.23 µlb	Echelon III
0.005 lb	0.23 µlb	Echelon III
0.003 lb	0.23 µlb	Echelon III
0.002 lb	0.23 µlb	Echelon III
0.001 lb	0.24 µlb	Echelon III

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Volume

Range	Best Uncertainty (\pm) ^{note 1}	Remarks
375 gal	13 in ³	Volume Transfer
300 gal	11 in ³	Volume Transfer
250 gal	9.0 in ³	Volume Transfer
200 gal	6.9 in ³	Volume Transfer
150 gal	5.3 in ³	Volume Transfer
100 gal	3.4 in ³	Volume Transfer
50 gal	1.8 in ³	Volume Transfer
30 gal	1.0 in ³	Volume Transfer
25 gal	0.90 in ³	Volume Transfer
20 gal	0.46 in ³	Volume Transfer
15 gal	0.31 in ³	Volume Transfer
10 gal	0.23 in ³	Volume Transfer
5 gal	0.19 in ³	Volume Transfer
25 gal	0.81 in ³	Gravimetric Method
5 gal	0.072 in ³	Gravimetric Method
1 gal	0.030 in ³	Gravimetric Method
0.5 gal	0.027 in ³	Gravimetric Method
1 qt	0.027 in ³	Gravimetric Method
1 pt	0.015 in ³	Gravimetric Method
0.5 pt	0.0070 in ³	Gravimetric Method
1 gill	0.0071 in ³	Gravimetric Method
2 fl oz	0.0014 in ³	Gravimetric Method
1 fl oz	0.0014 in ³	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%.
 2. Tapes greater than 150 feet uncertainty equals $0.068 + 0.0053$ inches per 10 foot interval.

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