

National Institute  
of Standards and Technology



National Voluntary  
Laboratory Accreditation Program

ISO/IEC 17025:1999  
ISO 9002:1994

## Scope of Accreditation



Revised 5/26/2004

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### CALIBRATION LABORATORIES

NVLAP LAB CODE 200396-0

#### OKLAHOMA BUREAU OF STANDARDS

2800 North Lincoln Boulevard

Oklahoma City, OK 73105-4298

Mr. Ken Fraley

Phone: 405-522-5459 Fax: 405-521-4912

E-Mail: [kfraley@oda.state.ok.us](mailto:kfraley@oda.state.ok.us)

URL: <http://www.state.ok.us/lab-bos.htm>

NVLAP Code: 20/A01

ANSI/NCSL Z540-1-1994; Part 1

Compliant

### DIMENSIONAL

NVLAP Code: 20/D13

Surveying Rods and Tapes

Range in inches	Best Uncertainty ( $\pm$ ) in inches <sup>note 1</sup>	Remarks
1	0.0034	Rigid Rules
2	0.0034	Rigid Rules
3	0.0034	Rigid Rules
4	0.0034	Rigid Rules
5	0.0034	Rigid Rules
6	0.0034	Rigid Rules
7	0.0034	Rigid Rules
8	0.0034	Rigid Rules

December 31, 2004

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9	0.0034	Rigid Rules
10	0.0034	Rigid Rules
11	0.0034	Rigid Rules
12	0.0034	Rigid Rules
24	0.0059	Rigid Rules
36	0.0082	Rigid Rules
48	0.0105	Rigid Rules

Range in feet	Best Uncertainty ( $\pm$ ) in inches <sup>note 1</sup>	Remarks
1	0.0049	Tapes - Bench Method
2	0.0050	Tapes - Bench Method
3	0.0050	Tapes - Bench Method
4	0.0050	Tapes - Bench Method
5	0.0049	Tapes - Bench Method
6	0.0049	Tapes - Bench Method
7	0.0049	Tapes - Bench Method
8	0.0049	Tapes - Bench Method

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A handwritten signature in black ink, appearing to read "Wm. R. Mahr".

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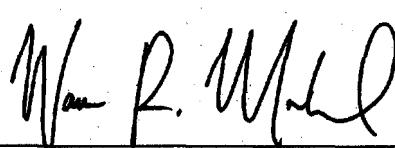
NVLAP LAB CODE 200396-0

#### OKLAHOMA BUREAU OF STANDARDS

9	0.0050	Tapes - Bench Method
10	0.0050	Tapes - Bench Method
20	0.0093	Tapes - Bench Method
30	0.0136	Tapes - Bench Method
40	0.0179	Tapes - Bench Method
50	0.0221	Tapes - Bench Method
60	0.0264	Tapes - Bench Method
70	0.0306	Tapes - Bench Method
80	0.0349	Tapes - Bench Method
90	0.0392	Tapes - Bench Method
100	0.0434	Tapes - Bench Method
110	0.0477	Tapes - Bench Method
120	0.0519	Tapes - Bench Method
130	0.0562	Tapes - Bench Method
140	0.0605	Tapes - Bench Method
150	0.0647	Tapes - Bench Method
>50	0.0632 <sup>note 2</sup>	Tapes - Bench Method

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### CALIBRATION LABORATORIES

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### OKLAHOMA BUREAU OF STANDARDS

#### MECHANICAL

*NVLAP Code:* 20/M08

Mass - Metric

Range	Best Uncertainty ( $\pm$ ) <sup>note 1</sup>	Remarks
30 kg	10.3 mg	Echelon I
20 kg	4.6 mg	Echelon I
10 kg	0.7 mg	Echelon I
5 kg	0.42 mg	Echelon I
3 kg	0.35 mg	Echelon I
2 kg	0.33 mg	Echelon I
1 kg	0.066 mg	Echelon I
500 g	0.034 mg	Echelon I
300 g	0.022 mg	Echelon I
200 g	0.015 mg	Echelon I
100 g	0.013 mg	Echelon I
50 g	0.0073 mg	Echelon I
30 g	0.0052 mg	Echelon I

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A handwritten signature in black ink that reads "William R. Muhl". Below the signature, the text "For the National Institute of Standards and Technology" is printed.

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#### OKLAHOMA BUREAU OF STANDARDS

20 g	0.0044 mg	Echelon I
10 g	0.0046 mg	Echelon I
5 g	0.0024 mg	Echelon I
3 g	0.0016 mg	Echelon I
2 g	0.0012 mg	Echelon I
1 g	0.0011 mg	Echelon I
500 mg	0.00070 mg	Echelon I
300 mg	0.00054 mg	Echelon I
200 mg	0.00050 mg	Echelon I
100 mg	0.00056 mg	Echelon I
50 mg	0.00029 mg	Echelon I
30 mg	0.00019 mg	Echelon I
20 mg	0.00015 mg	Echelon I
10 mg	0.00013 mg	Echelon I
5 mg	0.00010 mg	Echelon I
3 mg	0.00009 mg	Echelon I
2 mg	0.00008 mg	Echelon I

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#### OKLAHOMA BUREAU OF STANDARDS

1 mg	0.00010 mg	Echelon I
1200 kg	10000 mg	Echelon II
750 kg	10000 mg	Echelon II
500 kg	1100 mg	Echelon II
250 kg	480 mg	Echelon II
200 kg	480 mg	Echelon II
100 kg	480 kg	Echelon II
50 kg	64 mg	Echelon II
30 kg	13 mg	Echelon II
20 kg	11 mg	Echelon II
10 kg	7 mg	Echelon II
5 kg	1.8 mg	Echelon II
3 kg	1.3 mg	Echelon II
2 kg	1.1 mg	Echelon II
1 kg	0.26 mg	Echelon II
500 g	0.14 mg	Echelon II
300 g	0.10 mg	Echelon II

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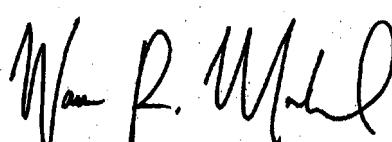
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### OKLAHOMA BUREAU OF STANDARDS

200 g	0.08 mg	Echelon II
100 g	0.030 mg	Echelon II
50 g	0.018 mg	Echelon II
30 g	0.014 mg	Echelon II
20 g	0.012 mg	Echelon II
10 g	0.0081 mg	Echelon II
5 g	0.0049 mg	Echelon II
3 g	0.0032 mg	Echelon II
2 g	0.0032 mg	Echelon II
1 g	0.0021 mg	Echelon II
500 mg	0.0018 mg	Echelon II
300 mg	0.0013 mg	Echelon II
200 mg	0.0010 mg	Echelon II
100 mg	0.00089 mg	Echelon II
50 mg	0.00064 mg	Echelon II
30 mg	0.00038 mg	Echelon II
20 mg	0.00044 mg	Echelon II

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#### OKLAHOMA BUREAU OF STANDARDS

10 mg	0.00034 mg	Echelon II
5 mg	0.00030 mg	Echelon II
3 mg	0.00030 mg	Echelon II
2 mg	0.00031 mg	Echelon II
1 mg	0.00026 mg	Echelon II
1200 kg	21000 mg	Echelon III
1000 kg	19000 mg	Echelon III
750 kg	12000 mg	Echelon III
500 kg	3700 mg	Echelon III
300 kg	3300 mg	Echelon III
250 kg	3700 mg	Echelon III
200 kg	2900 mg	Echelon III
100 kg	1800 mg	Echelon III
50 kg	1400 mg	Echelon III
30 kg	180 mg	Echelon III
25 kg	170 mg	Echelon III
20 kg	160 mg	Echelon III

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### OKLAHOMA BUREAU OF STANDARDS

10 kg	150 mg	Echelon III
5 kg	13.0 mg	Echelon III
3 kg	7.8 mg	Echelon III
2 kg	7.2 mg	Echelon III
1 kg	6.1 mg	Echelon III
500 g	6.0 mg	Echelon III
300 g	3.8 mg	Echelon III
200 g	1.1 mg	Echelon III
100 g	0.50 mg	Echelon III
50 g	0.30 mg	Echelon III
30 g	0.28 mg	Echelon III
20 g	0.28 mg	Echelon III
10 g	0.14 mg	Echelon III
5 g	0.14 mg	Echelon III
3 g	0.14 mg	Echelon III
2 g	0.14 mg	Echelon III
1 g	0.12 mg	Echelon III

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500 mg	0.12 mg	Echelon III
300 mg	0.12 mg	Echelon III
200 mg	0.077 mg	Echelon III
100 mg	0.070 mg	Echelon III
50 mg	0.052 mg	Echelon III
30 mg	0.052 mg	Echelon III
20 mg	0.052 mg	Echelon III
10 mg	0.055 mg	Echelon III
5 mg	0.048 mg	Echelon III
3 mg	0.048 mg	Echelon III
2 mg	0.048 mg	Echelon III
1 mg	0.040 mg	Echelon III

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### CALIBRATION LABORATORIES

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### OKLAHOMA BUREAU OF STANDARDS

**NVLAP Code:** 20/M12

Volume

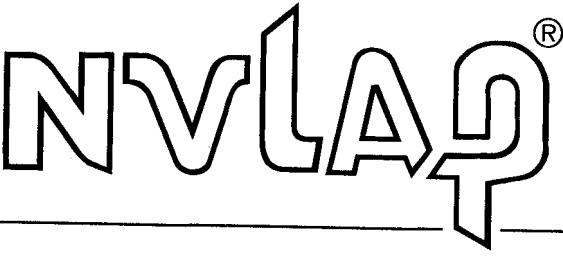
Range	Best Uncertainty ( $\pm$ ) <sup>note 1</sup>	Remarks
5 gal	0.14 in <sup>3</sup>	Volume Transfer Method
10 gal	0.24 in <sup>3</sup>	Volume Transfer Method
15 gal	0.30 in <sup>3</sup>	Volume Transfer Method
20 gal	0.42 in <sup>3</sup>	Volume Transfer Method
25 gal	1.0 in <sup>3</sup>	Volume Transfer Method
30 gal	1.6 in <sup>3</sup>	Volume Transfer Method
50 gal	2.2 in <sup>3</sup>	Volume Transfer Method
100 gal	3.5 in <sup>3</sup>	Volume Transfer Method
200 gal	6.7 in <sup>3</sup>	Volume Transfer Method
375 gal	12 in <sup>3</sup>	Volume Transfer Method
5 gal	0.05 in <sup>3</sup>	Volume Gravimetric Method
25 gal	0.75 in <sup>3</sup>	Volume Gravimetric Method

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1. Represents an expanded uncertainty using a coverage factor, k=2.
2. Tapes Greater than 150 feet uncertainty equals  $0.0632 + 0.00426$  inches per 10 foot interval

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