



**National Voluntary  
Laboratory Accreditation Program**



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

**State of Ohio Metrology Laboratory**  
8995 East Main Street  
Reynoldsburg, OH 43068-3399  
Mrs. Fran Elson-Houston  
Phone: 614-728-6290 Fax: 614-728-6424  
E-mail: houston@agri.ohio.gov  
URL: <http://www.agri.ohio.gov/weights>

**CALIBRATION LABORATORIES**

**NVLAP LAB CODE 200420-0**  
Scope Revised: 2009-07-15

**DIMENSIONAL**

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

<i>Range in inches</i>	<i>Best Uncertainty (<math>\pm</math>) <sup>note 1</sup></i>	<i>Remarks</i>
6 to 12	0.0068	Rigid Rules, 72 inch
6 to 18	0.011	Rigid Rules, 72 inch
6 to 24	0.011	Rigid Rules, 72 inch
6 to 36	0.015	Rigid Rules, 72 inch
6 to 48	0.018	Rigid Rules, 72 inch
6 to 60	0.022	Rigid Rules, 72 inch
6 to 72	0.029	Rigid Rules, 72 inch
1 to 2	0.0038	Rigid Rules, 18 inch
1 to 3	0.0038	Rigid Rules, 18 inch
1 to 4	0.0038	Rigid Rules, 18 inch
1 to 5	0.0038	Rigid Rules, 18 inch
1 to 6	0.0038	Rigid Rules, 18 inch
1 to 7	0.0068	Rigid Rules, 18 inch
1 to 8	0.0068	Rigid Rules, 18 inch
1 to 9	0.0068	Rigid Rules, 18 inch
1 to 10	0.0068	Rigid Rules, 18 inch
1 to 11	0.0068	Rigid Rules, 18 inch
1 to 12	0.0068	Rigid Rules, 18 inch
1 to 13	0.011	Rigid Rules, 18 inch

2009-07-01 through 2010-06-30

*Effective dates*

*Sally S. Bruce*

*For the National Institute of Standards and Technology*



# National Voluntary Laboratory Accreditation Program



## CALIBRATION LABORATORIES

NVLAP LAB CODE 200420-0

Scope Revised: 2009-07-15

1 to 14	0.011	Rigid Rules, 18 inch
1 to 15	0.011	Rigid Rules, 18 inch
1 to 16	0.011	Rigid Rules, 18 inch
1 to 17	0.011	Rigid Rules, 18 inch
1 to 18	0.011	Rigid Rules, 18 inch

<i>Range in ft</i>	<i>Best Uncertainty (±) in inches <sup>note 1</sup></i>	<i>Remarks</i>
0 to 6	0.010	Tape to Bench
0 to 30	0.033	Tape to Bench
0 to 50	0.041	Tape to Bench
0 to 100	0.065	Tape to Bench

## MECHANICAL

NVLAP Code: 20/M08

Mass- Metric

<i>Range</i>	<i>Best Uncertainty (±) <sup>note 1</sup></i>	<i>Remarks</i>
100 kg	0.40 g	Echelon II
50 kg	28.0 mg	Echelon II
30 kg	18.0 mg	Echelon II
25 kg	10 mg	Echelon II
20 kg	9.9 mg	Echelon II
10 kg	1.1 mg	Echelon II
5 kg	0.42 mg	Echelon II
3 kg	0.38 mg	Echelon II
2 kg	0.24 mg	Echelon II
1 kg	0.096 mg	Echelon II
500 g	0.028 mg	Echelon II
300 g	0.063 mg	Echelon II
200 g	0.060 mg	Echelon II
100 g	0.028 mg	Echelon II
50 g	0.010 mg	Echelon II
30 g	0.013 mg	Echelon II
20 g	0.020 mg	Echelon II

2009-07-01 through 2010-06-30

Effective dates

*Sally S. Bruce*

For the National Institute of Standards and Technology



# National Voluntary Laboratory Accreditation Program



## CALIBRATION LABORATORIES

NVLAP LAB CODE 200420-0  
Scope Revised: 2009-07-15

10 g	0.012 mg	Echelon II
5 g	0.0046 mg	Echelon II
3 g	0.0020 mg	Echelon II
2 g	0.0016 mg	Echelon II
1 g	0.0032 mg	Echelon II
500 mg	0.0011 mg	Echelon II
300 mg	0.0020 mg	Echelon II
200 mg	0.011 mg	Echelon II
100 mg	0.00092 mg	Echelon II
50 mg	0.0017 mg	Echelon II
30 mg	0.00086 mg	Echelon II
20 mg	0.00099 mg	Echelon II
10 mg	0.0010 mg	Echelon II
5 mg	0.00082 mg	Echelon II
3 mg	0.00080 mg	Echelon II
2 mg	0.0017 mg	Echelon II
1 mg	0.00060 mg	Echelon II
Mass- Avoirdupois		
2000 lb	3.3 g	Echelon II
1000 lb	0.92 g	Echelon II
500 lb	0.79 g	Echelon II
50 lb	19 mg	Echelon II
25 lb	4.6 mg	Echelon II
20 lb	3.0 mg	Echelon II
10 lb	2.6 mg	Echelon II
5 lb	1.6 mg	Echelon II
2 lb	20 mg	Echelon II
1 lb	10 mg	Echelon II
0.5 lb	0.063 mg	Echelon II
0.3 lb	0.051 mg	Echelon II
0.2 lb	0.034 mg	Echelon II
0.1 lb	0.017 mg	Echelon II
0.05 lb	0.015 mg	Echelon II

2009-07-01 through 2010-06-30

Effective dates

*Sally S. Bruce*

For the National Institute of Standards and Technology



# National Voluntary Laboratory Accreditation Program



## CALIBRATION LABORATORIES

NVLAP LAB CODE 200420-0  
Scope Revised: 2009-07-15

0.03 lb	0.018 mg	Echelon II
0.02 lb	0.0014 mg	Echelon II
0.01 lb	0.0066 mg	Echelon II
0.005 lb	0.039 mg	Echelon II
0.003 lb	0.0047 mg	Echelon II
0.002 lb	0.0037 mg	Echelon II
0.001 lb	0.0026 mg	Echelon II
Mass-Metric		
1000 kg	14 g	Echelon III
500 kg	6.1 g	Echelon III
300 kg	4.8 g	Echelon III
200 kg	3.4 g	Echelon III
100 kg	0.22 g	Echelon III
50 kg	0.11 g	Echelon III
25 kg	0.054 g	Echelon III
20 kg	0.039 g	Echelon III
10 kg	0.026 g	Echelon III
5 kg	0.93 mg	Echelon III
2 kg	0.83 mg	Echelon III
1 kg	0.16 mg	Echelon III
500 g	0.074 mg	Echelon III
300 g	0.078 mg	Echelon III
200 g	0.070 mg	Echelon III
100 g	0.046 mg	Echelon III
50 g	0.021 mg	Echelon III
30 g	0.018 mg	Echelon III
20 g	0.021 mg	Echelon III
10 g	0.013 mg	Echelon III
5 g	0.0053 mg	Echelon III
3 g	0.0026 mg	Echelon III
2 g	0.0021 mg	Echelon III
1g	0.0034 mg	Echelon III
500 mg	0.0013 mg	Echelon III

2009-07-01 through 2010-06-30

Effective dates

*Sally S. Bruce*

For the National Institute of Standards and Technology



# National Voluntary Laboratory Accreditation Program



## CALIBRATION LABORATORIES

NVLAP LAB CODE 200420-0  
Scope Revised: 2009-07-15

300 mg	0.0021 mg	Echelon III
200 mg	0.0012 mg	Echelon III
100 mg	0.0011 mg	Echelon III
50 mg	0.0017 mg	Echelon III
30 mg	0.00096 mg	Echelon III
20 mg	0.0011 mg	Echelon III
10 mg	0.0011 mg	Echelon III
5 mg	0.0020 mg	Echelon III
3 mg	0.00086 mg	Echelon III
2 mg	0.0017 mg	Echelon III
1 mg	0.00069 mg	Echelon III

### Mass-Avoirdupois

2500 lb	36.0 g	Echelon III
2000 lb	12 g	Echelon III
1000 lb	5.8 g	Echelon III
500 lb	1.9 g	Echelon III
50 lb	0.032 g	Echelon III
25 lb	0.042 g	Echelon III
20 lb	2.8 mg	Echelon III
10 lb	1.9 mg	Echelon III
5 lb	1.1 mg	Echelon III
2 lb	0.11 mg	Echelon III
1 lb	0.076 mg	Echelon III
0.5 lb	1.0 mg	Echelon III
0.3 lb	0.034 mg	Echelon III
0.2 lb	0.020 mg	Echelon III
0.1 lb	0.017 mg	Echelon III
0.05 lb	0.014 mg	Echelon III
0.03 lb	0.012 mg	Echelon III
0.02 lb	0.0089 mg	Echelon III
0.01 lb	0.0026 mg	Echelon III
0.005 lb	0.019 mg	Echelon III
0.003 lb	0.0022 mg	Echelon III

2009-07-01 through 2010-06-30

Effective dates

*Sally S. Bruce*

For the National Institute of Standards and Technology



# National Voluntary Laboratory Accreditation Program



## CALIBRATION LABORATORIES

NVLAP LAB CODE 200420-0  
Scope Revised: 2009-07-15

0.002 lb	0.0020 mg	Echelon III
0.001 lb	0.0015 mg	Echelon III

NVLAP Code: 20/M12  
Volume

<i>Range</i>	<i>Best Uncertainty (<math>\pm</math>) <sup>note 1</sup></i>	<i>Remarks</i>
100 gal	4.5 in <sup>3</sup>	Volume Transfer
50 gal	3.0 in <sup>3</sup>	Volume Transfer
25 gal	1.2 in <sup>3</sup>	Volume Transfer
5 gal	0.54 in <sup>3</sup>	Volume Transfer
50 gal	2.8 in <sup>3</sup>	Gravimetric Method
25 gal	1.0 in <sup>3</sup>	Gravimetric Method
5 gal	0.39 in <sup>3</sup>	Gravimetric Method
1 gal	0.53 in <sup>3</sup>	Gravimetric Method
½ gal	0.026 in <sup>3</sup>	Gravimetric Method
1 qt	0.021 in <sup>3</sup>	Gravimetric Method
1 pt	0.018 in <sup>3</sup>	Gravimetric Method
1 L	0.021 in <sup>3</sup>	Gravimetric Method
100 mL	0.0092 in <sup>3</sup>	Gravimetric Method

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

2009-07-01 through 2010-06-30

Effective dates

*Sally S. Bruce*

For the National Institute of Standards and Technology