



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Arizona Department of Weights and Measures Metrology Laboratory

4425 West Olive Avenue, Suite 134

Glendale, AZ 85302-3844

Mrs. Kelleen K. Larson

Phone: 623-463-4939 Fax: 623-463-0440

E-mail: klarson@azdwm.gov

URL: <http://www.azdwm.gov>

CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

NVLAP Code: 20/A01

ANSI/NCSL Z540-1-1994; Part 1

Compliant

MECHANICAL

NVLAP Code: 20/M08

Mass - Metric

| <i>Range</i> | <i>Best Uncertainty (\pm) ^{note 1}</i> | <i>Remarks</i> |
|--------------|--|----------------|
| 500 kg | 4.4 g | Echelon II |
| 250 kg | 4.4 g | Echelon II |
| 30 kg | 13 mg | Echelon II |
| 25 kg | 12b mg | Echelon II |
| 20 kg | 12 mg | Echelon II |
| 10 kg | 4.6 mg | Echelon II |
| 5 kg | 3.8 mg | Echelon II |
| 4 kg | 3.5 mg | Echelon II |
| 3 kg | 3.5 mg | Echelon II |
| 2 kg | 3.3 mg | Echelon II |
| 1 kg | 0.082 mg | Echelon II |
| 500 g | 0.070 mg | Echelon II |
| 300 g | 0.066 mg | Echelon II |
| 200 g | 0.065 mg | Echelon II |
| 100 g | 0.022 mg | Echelon II |
| 50 g | 0.028 mg | Echelon II |

2008-10-01 through 2009-09-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology



National Voluntary Laboratory Accreditation Program



CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

| | | |
|--------------------|-----------|------------|
| 30 g | 0.026 mg | Echelon II |
| 20 g | 0.025 mg | Echelon II |
| 10 g | 0.010 mg | Echelon II |
| 5 g | 0.0051 mg | Echelon II |
| 3 g | 0.0043 mg | Echelon II |
| 2 g | 0.0039 mg | Echelon II |
| 1 g | 0.0038 mg | Echelon II |
| 500 mg | 0.0032 mg | Echelon II |
| 300 mg | 0.0030 mg | Echelon II |
| 200 mg | 0.0029 mg | Echelon II |
| 100 mg | 0.0014 mg | Echelon II |
| 50 mg | 0.0013 mg | Echelon II |
| 30 mg | 0.0013 mg | Echelon II |
| 20 mg | 0.0013 mg | Echelon II |
| 10 mg | 0.0013 mg | Echelon II |
| 5 mg | 0.0013 mg | Echelon II |
| 3 mg | 0.0013 mg | Echelon II |
| 2 mg | 0.0013 mg | Echelon II |
| 1 mg | 0.0013 mg | Echelon II |
| Mass – Avoirdupois | | |
| 2500 lb | 0.071 lb | Echelon II |
| 2000 lb | 0.068 lb | Echelon II |
| 1000 lb | 0.0097 lb | Echelon II |
| 500 lb | 0.0097 lb | Echelon II |
| 50 lb | 13 mg | Echelon II |
| 30 lb | 12 mg | Echelon II |
| 25 lb | 10 mg | Echelon II |
| 20 lb | 5.3 mg | Echelon II |
| 10 lb | 4.2 mg | Echelon II |
| 5 lb | 3.5 mg | Echelon II |
| 4 lb | 3.3 mg | Echelon II |
| 3 lb | 3.3 mg | Echelon II |
| 2 lb | 0.28 mg | Echelon II |
| 1 lb | 0.077 mg | Echelon II |

2008-10-01 through 2009-09-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology



National Voluntary Laboratory Accreditation Program



CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

| | | |
|---------------|-----------|-------------|
| 0.5 lb | 0.065 mg | Echelon II |
| 0.3 lb | 0.035 mg | Echelon II |
| 0.2 lb | 0.030 mg | Echelon II |
| 0.1 lb | 0.027 mg | Echelon II |
| 0.05 lb | 0.025 mg | Echelon II |
| 0.03 lb | 0.025 mg | Echelon II |
| 0.02 lb | 0.0095 mg | Echelon II |
| 0.01 lb | 0.0048 mg | Echelon II |
| 0.005 lb | 0.0040 mg | Echelon II |
| 0.003 lb | 0.0039 mg | Echelon II |
| 0.002 lb | 0.0034 mg | Echelon II |
| 0.001 lb | 0.0032 mg | Echelon II |
| | | |
| 8 oz | 0.065 mg | Echelon II |
| 4 oz | 0.035 mg | Echelon II |
| 2 oz | 0.028 mg | Echelon II |
| 1 oz | 0.025 mg | Echelon II |
| 1/2 oz | 0.025 mg | Echelon II |
| 1/4 oz | 0.023 mg | Echelon II |
| 1/8 oz | 0.0045 mg | Echelon II |
| 1/16 oz | 0.0040 mg | Echelon II |
| 1/32 oz | 0.0034 mg | Echelon II |
| | | |
| Mass – Metric | | |
| 500 kg | 8.2 g | Echelon III |
| 250 kg | 7.8 g | Echelon III |
| 50 kg | 55 mg | Echelon III |
| 25 kg | 46 mg | Echelon III |
| 20 kg | 46 mg | Echelon III |
| 10 kg | 31 mg | Echelon III |
| 5 kg | 5.8 mg | Echelon III |
| 4 kg | 6.5 mg | Echelon III |
| 3 kg | 5.6 mg | Echelon III |
| 2.5 kg | 5.6 mg | Echelon III |
| 2 kg | 5.6 mg | Echelon III |
| 1 kg | 4.4 mg | Echelon III |
| 524.20 g | 4.4 mG | Echelon III |

2008-10-01 through 2009-09-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

| | | |
|----------|----------|-------------|
| 500 g | 4.4 mg | Echelon III |
| 464.08 g | 4.4 mg | Echelon III |
| 300 g | 4.4 mg | Echelon III |
| 250 g | 4.4 mg | Echelon III |
| 209.68 g | 4.4 mg | Echelon III |
| 200 g | 0.13 mg | Echelon III |
| 185.63 g | 0.12 mg | Echelon III |
| 104.84 g | 0.11 mg | Echelon III |
| 100 g | 0.11 mg | Echelon III |
| 92.82 g | 0.11 mg | Echelon III |
| 50 g | 0.11 mg | Echelon III |
| 41.94 g | 0.11 mg | Echelon III |
| 30 g | 0.11 mg | Echelon III |
| 25 g | 0.11 mg | Echelon III |
| 20.97 g | 0.11 mg | Echelon III |
| 20 g | 0.11 mg | Echelon III |
| 10 g | 0.11 mg | Echelon III |
| 5 g | 0.10 mg | Echelon III |
| 3 g | 0.012 mg | Echelon III |
| 2 g | 0.012 mg | Echelon III |
| 1 g | 0.011 mg | Echelon III |
| 500 mg | 0.011 mg | Echelon III |
| 300 mg | 0.011 mg | Echelon III |
| 200 mg | 0.011 mg | Echelon III |
| 100 mg | 0.010 mg | Echelon III |
| 50 mg | 0.010 mg | Echelon III |
| 30 mg | 0.010 mg | Echelon III |
| 20 mg | 0.010 mg | Echelon III |
| 10 mg | 0.010 mg | Echelon III |
| 5 mg | 0.010 mg | Echelon III |
| 3 mg | 0.010 mg | Echelon III |
| 2 mg | 0.010 mg | Echelon III |
| 1 mg | 0.010 mg | Echelon III |

2008-10-01 through 2009-09-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

Mass – Avoirdupois

| | | |
|----------|----------|-------------|
| 5000 lb | 0.15 lb | Echelon III |
| 3000 lb | 0.084 lb | Echelon III |
| 2500 lb | 0.12 lb | Echelon III |
| 2000 lb | 0.12 lb | Echelon III |
| 1000 lb | 0.010 lb | Echelon III |
| 500 lb | 0.010 lb | Echelon III |
| 100 lb | 55 mg | Echelon III |
| 50 lb | 47 mg | Echelon III |
| 30 lb | 33 mg | Echelon III |
| 25 lb | 45 mg | Echelon III |
| 20 lb | 32 mg | Echelon III |
| 18 lb | 33 mg | Echelon III |
| 15 lb | 32 mg | Echelon III |
| 10 lb | 6.1 mg | Echelon III |
| 5 lb | 5.7 mg | Echelon III |
| 4 lb | 5.6 mg | Echelon III |
| 3 lb | 5.6 mg | Echelon III |
| 2 lb | 4.4 mg | Echelon III |
| 1 lb | 4.4 mg | Echelon III |
| 0.5 lb | 4.4 mg | Echelon III |
| 0.3 lb | 0.11 mg | Echelon III |
| 0.2 lb | 0.11 mg | Echelon III |
| 0.1 lb | 0.11 mg | Echelon III |
| 0.05 lb | 0.11 mg | Echelon III |
| 0.03 lb | 0.11 mg | Echelon III |
| 0.02 lb | 0.10 mg | Echelon III |
| 0.01 lb | 0.012 mg | Echelon III |
| 0.005 lb | 0.011 mg | Echelon III |
| 0.003 lb | 0.011 mg | Echelon III |
| 0.002 lb | 0.011 mg | Echelon III |
| 0.001 lb | 0.011 mg | Echelon III |
| 100 oz | 5.7 mg | Echelon III |
| 80 oz | 5.7 mg | Echelon III |

2008-10-01 through 2009-09-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology



National Voluntary Laboratory Accreditation Program



CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

| | | |
|---------|----------|-------------|
| 40 oz | 5.4 mg | Echelon III |
| 20 oz | 4.4 mg | Echelon III |
| 10 oz | 4.4 mg | Echelon III |
| 8 oz | 4.4 mg | Echelon III |
| 5 oz | 4.4 mg | Echelon III |
| 4 oz | 0.11 mg | Echelon III |
| 2 oz | 0.11 mg | Echelon III |
| 1 oz | 0.11 mg | Echelon III |
| 1/2 oz | 0.11 mg | Echelon III |
| 1/4 oz | 0.11 mg | Echelon III |
| 1/8 oz | 0.012 mg | Echelon III |
| 1/16 oz | 0.011 mg | Echelon III |
| 1/32 oz | 0.011 mg | Echelon III |
| 0.5 oz | 0.11 mg | Echelon III |
| 0.2 oz | 0.11 mg | Echelon III |
| 0.1 oz | 0.012 mg | Echelon III |
| 0.05 oz | 0.011 mg | Echelon III |

NVLAP Code: 20/M12

Volume

| Range | Best Uncertainty (\pm) in inches³ note 1 | Remarks |
|--------------|---|--------------------|
| 1044 gal | 17 | Volume Transfer |
| 500 gal | 11 | Volume Transfer |
| 200 gal | 7.1 | Volume Transfer |
| 100 gal | 5.1 | Volume Transfer |
| 50 gal | 3.1 | Volume Transfer |
| 15 gal | 0.62 | Volume Transfer |
| 5 gal | 0.45 | Volume Transfer |
| 1 gal | 0.44 | Volume Transfer |
| 100 gal | 2.07 | Volume Gravimetric |
| 50 gal | 1.05 | Volume Gravimetric |
| 25 gal | 0.76 | Volume Gravimetric |
| 15 gal | 0.49 | Volume Gravimetric |

2008-10-01 through 2009-09-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 200381-0

5 gal 0.15
20 gal 1.6

Volume Gravimetric
SVP - Volume Gravimetric

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

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology