



CALIBRATION LABORATORIES

NVLAP LAB CODE 200560-0

Scope Revised: 2012-11-08

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

<p>Florida Department of Agriculture Metrology Laboratory 3125 Conner Blvd. Lab #2 Tallahassee, FL 32399-1650 Mr. Davis Terry Phone: 850-921-1580 Fax: 850-921-1593 E-mail: davis.terry@freshfromflorida.com URL: http://doacs.state.fl.us</p>	<p>Parameter(s) of Accreditation Mechanical</p> <p>This laboratory is compliant to ANSI/NCSL Z540-1-1994; Part 1. (NVLAP Code: 20/A01)</p>
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
MECHANICAL			
NVLAP Code: 20/M08 MASS Metric	30 kg	22 mg	Echelon II
	25 kg	19 mg	
	20 kg	19 mg	
	10 kg	1.7 mg	
	5 kg	0.94 mg	
	3 kg	0.74 mg	
	2 kg	0.64 mg	
	1 kg	0.10 mg	
	500 g	0.084 mg	
	300 g	0.082 mg	
	200 g	0.062 mg	
	100 g	0.021 mg	
	50 g	0.013 mg	
	30 g	0.012 mg	
	20 g	0.0092 mg	
	10 g	0.0082 mg	
	5 g	0.0033 mg	
	3 g	0.0021 mg	
	2 g	0.0017 mg	
	1 g	0.0018 mg	
500 mg	0.0013 mg		

2012-07-01 through 2013-06-30

Effective dates

For the National Institute of Standards and Technology



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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) Notes 1,2

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) <small>Note 3</small>	Remarks
Avoirdupois	300 mg	0.0013 mg	Echelon II
	200 mg	0.0012 mg	
	100 mg	0.0012 mg	
	50 mg	0.0012 mg	
	30 mg	0.0011 mg	
	20 mg	0.0011 mg	
	10 mg	0.0012 mg	
	5 mg	0.0012 mg	
	3 mg	0.0012 mg	
	2 mg	0.0012 mg	
	1 mg	0.0013 mg	
	1000 lb	1.4 g	
	500 lb	0.77 g	
	50 lb	20 mg	
	30 lb	19 mg	
	20 lb	2.5 mg	
	10 lb	1.3 mg	
	5 lb	0.77 mg	
	2 lb	0.28 mg	
	1 lb	0.079 mg	
	0.5 lb	0.073 mg	
	0.3 lb	0.018 mg	
	0.2 lb	0.015 mg	
	0.1 lb	0.017 mg	
	0.05 lb	0.011 mg	
	0.03 lb	0.010 mg	
	0.02 lb	0.0092 mg	
	0.01 lb	0.0093 mg	
	0.005 lb	0.0032 mg	
	0.002 lb	0.0024 mg	
	0.001 lb	0.0023 mg	
	4 oz	0.075 mg	
	2 oz	0.024 mg	
1 oz	0.017 mg		

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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
Metric	1/2 oz	0.011 mg	Echelon III
	1/4 oz	0.012 mg	
	1/8 oz	0.0084 mg	
	1/16 oz	0.0033 mg	
	1/32 oz	0.0026 mg	
	1000 kg	51 g	
	500 kg	4.2 g	
	250 kg	2.3 g	
	100 kg	1.5 g	
	50 kg	1.5 g	
	25 kg	60 mg	
	20 kg	60 mg	
	10 kg	4.7 mg	
	5 kg	3.8 mg	
	3 kg	3.5 mg	
	2 kg	3.4 mg	
	1 kg	0.38 mg	
	500 g	0.38 mg	
	300 g	0.38 mg	
	200 g	0.36 mg	
	100 g	0.26 mg	
	50 g	0.26 mg	
	30 g	0.26 mg	
	20 g	0.26 mg	
	10 g	0.26 mg	
	5 g	0.26 mg	
	3 g	0.26 mg	
	2 g	0.26 mg	
	1 g	0.26 mg	
	500 mg	0.0033 mg	
	300 mg	0.0033 mg	
	200 mg	0.0031 mg	
	100 mg	0.0031 mg	
50 mg	0.0031 mg		
30 mg	0.0030 mg		

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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
Avoirdupois	20 mg	0.0030 mg	Echelon III
	10 mg	0.0031 mg	
	5 mg	0.0031 mg	
	3 mg	0.0031 mg	
	2 mg	0.0031 mg	
	1 mg	0.0033 mg	
	5000 lb	53 g	
	4000 lb	52 g	
	3000 lb	51 g	
	2500 lb	46 g	
	1000 lb	4.3 g	
	500 lb	2.2 g	
	100 lb	0.77 g	
	50 lb	63 mg	
	25 lb	47 mg	
	20 lb	33 mg	
	10 lb	4.2 mg	
	5 lb	2.9 mg	
	2 lb	0.66 mg	
	1 lb	0.38 mg	
	0.5 lb	0.37 mg	
	0.3 lb	0.35 mg	
	0.2 lb	0.26 mg	
	0.1 lb	0.26 mg	
	0.05 lb	0.26 mg	
	0.03 lb	0.25 mg	
	0.02 lb	0.25 mg	
	0.01 lb	0.055 mg	
	0.005 lb	0.052 mg	
	0.002 lb	0.052 mg	
0.001 lb	0.052 mg		
4 oz	0.38 mg		
2 oz	0.26 mg		
1 oz	0.26 mg		

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Measured Parameter or Device Calibrated	Range	Uncertainty ($k=2$) ^{Note 3}	Remarks
	1/2 oz 1/4 oz 1/8 oz 1/16 oz 1/32 oz	0.057 mg 0.057 mg 0.055 mg 0.052 mg 0.052 mg	
NVLAP Code: 20/M12 VOLUME Volume	5 gal 1 gal 1500 gal 1000 gal 750 gal 200 gal 100 gal 50 gal 10 gal 5 gal 1 gal	0.00046 gal 0.00014 gal 36 in ³ 22 in ³ 19 in ³ 4.4 in ³ 2.2 in ³ 2.0 in ³ 0.54 in ³ 0.45 in ³ 0.43 in ³	Gravimetric Method Volume Transfer Method
Liquefied Petroleum Gas Prover (LPG)	100 gal 25 gal	3.8 in ³ 1.7 in ³	Volume Transfer Method
END			

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Notes

Note 1: A Calibration and Measurement Capability (CMC) is a description of the best result of a calibration or measurement (result with the smallest uncertainty of measurement) that is available to the laboratory's customers under normal conditions, when performing more or less routine calibrations of nearly ideal measurement standards or instruments. The CMC is described in the laboratory's scope of accreditation by: the measurement parameter/device being calibrated, the measurement range, the uncertainty associated with that range (see note 3), and remarks on additional parameters, if applicable.

Note 2: Calibration and Measurement Capabilities are traceable to the national measurement standards of the U.S. or to the national measurement standards of other countries and are thus traceable to the internationally accepted representation of the appropriate SI (Système International) unit.

Note 3: The uncertainty associated with a measurement in a CMC is an expanded uncertainty using a coverage factor, $k = 2$, with a level of confidence of approximately 95 %. Units for the measurand and its uncertainty are to match. Exceptions to this occur when marketplace practice employs mixed units, such as when the artifact to be measured is labeled in non-SI units and the uncertainty is given in SI units (Example: 5 lb weight with uncertainty given in mg).

Note 3a: The uncertainty of a specific calibration by the laboratory may be greater than the uncertainty in the CMC due to the condition and behavior of the customer's device and specific circumstances of the calibration. The uncertainties quoted do not include possible effects on the calibrated device of transportation, long term stability, or intended use.

Note 3b: As the CMC represents the best measurement results achievable under normal conditions, the accredited calibration laboratory shall not report smaller uncertainty of measurement than that given in a CMC for calibrations or measurements covered by that CMC.

Note 3c: As described in Note 1, CMCs cover calibrations and measurements that are available to the laboratory's customers under *normal conditions*. However, the laboratory may have the capability to offer special tests, employing special conditions, which yield calibration or measurement results with lower uncertainties. Such special tests are not covered by the CMCs and are outside the laboratory's scope of accreditation. In this case, NVLAP requirements for the labeling, on calibration reports, of results outside the laboratory's scope of accreditation apply. These requirements are set out in Annex A.1.h. of NIST Handbook 150, Procedures and General Requirements.

Note 4: Uncertainties associated with field service calibration may be greater as they incorporate on-site environmental contributions, transportation effects, or other factors that affect the measurements. (This note applies only if marked in the body of the scope.)

Note 5: Values listed with percent (%) are percent of reading or generated value unless otherwise noted.

Note 6: NVLAP accreditation is the formal recognition of specific calibration capabilities. Neither NVLAP nor NIST guarantee the accuracy of individual calibrations made by accredited laboratories.

Note 7: See [NIST Handbook 150](#) for further explanation of these notes.

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