

**National Voluntary
Laboratory Accreditation Program**



CALIBRATION LABORATORIES

NVLAP LAB CODE 600384-0

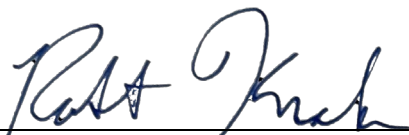
SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

<p>South Dakota State Metrology Laboratory 1100 Otter Rd Sturgis, South Dakota Mr. Ron Peterson Phone: 605-347-7541 E-mail: SDMetrologyLab@state.sd.us URL: https://dps.sd.gov/inspections/weights-measures/metrology-lab</p>	<p>Fields of Calibration Mechanical</p>
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Expanded Uncertainty ^{Note 3}	Remarks
MECHANICAL			
MASS DETERMINATION (20/M08)			
Metric	5 kg	1.4 mg	Echelon II
	3 kg	0.92 mg	
	2 kg	0.58 mg	
	1 kg	0.68 mg	
	500 g	0.11 mg	
	300 g	0.10 mg	
	200 g	0.061 mg	
	100 g	0.041 mg	
	50 g	0.039 mg	
	30 g	0.026 mg	
	20 g	0.016 mg	
	10 g	0.011 mg	
	5 g	0.0089 mg	
	3 g	0.010 mg	
	2 g	0.0088 mg	
	1 g	0.0051 mg	
	500 mg	0.0053 mg	
	300 mg	0.0032 mg	
	200 mg	0.0043 mg	
	100 mg	0.0025 mg	

2026-02-02 through 2026-12-31
 Effective dates


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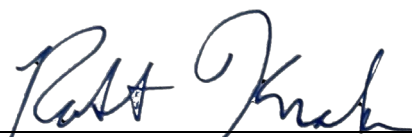
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Expanded Uncertainty ^{Note 3}	Remarks
Avoirdupois	50 mg	0.0025 mg	Echelon II
	30 mg	0.0029 mg	
	20 mg	0.0025 mg	
	10 mg	0.0026 mg	
	5 mg	0.0023 mg	
	3 mg	0.0023 mg	
	2 mg	0.0030 mg	
	1 mg	0.0032 mg	
	10 lb	1.5 mg	
	5 lb	0.65 mg	
	3 lb	0.48 mg	
	2 lb	0.42 mg	
	1 lb	0.14 mg	
	0.5 lb	0.080 mg	
	0.3 lb	0.052 mg	
	0.2 lb	0.042 mg	
	0.1 lb	0.034 mg	
	0.05 lb	0.031 mg	
	0.03 lb	0.017 mg	
	0.02 lb	0.019 mg	
	0.01 lb	0.0098 mg	
	0.005 lb	0.0076 mg	
	0.003 lb	0.0044 mg	
	0.002 lb	0.0062 mg	
	0.001 lb	0.0045 mg	
	8 oz	0.080 mg	
	4 oz	0.050 mg	
	2 oz	0.034 mg	
	1 oz	0.033 mg	
	1/2 oz	0.016 mg	
1/4 oz	0.0096 mg		
1/8 oz	0.011 mg		
1/16 oz	0.0049 mg		

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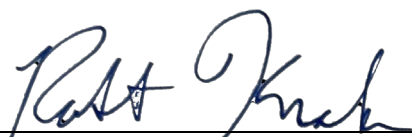
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Expanded Uncertainty ^{Note 3}	Remarks
Metric	1/32 oz	0.0068 mg	Echelon III
	30 kg	280 mg	
	20 kg	200 mg	
	10 kg	120 mg	
	5 kg	22 mg	
	3 kg	22 mg	
	2 kg	8.7 mg	
	1 kg	4.5 mg	
	500 g	3.2 mg	
	300 g	3.2 mg	
	200 g	1.7 mg	
	100 g	0.89 mg	
	50 g	0.43 mg	
	30 g	0.43 mg	
	20 g	0.17 mg	
	10 g	0.091 mg	
	5 g	0.067 mg	
	3 g	0.067 mg	
	2 g	0.050 mg	
	1 g	0.040 mg	
	500 mg	0.034 mg	
	300 mg	0.014 mg	
	200 mg	0.024 mg	
	100 mg	0.020 mg	
	50 mg	0.020 mg	
	30 mg	0.0078 mg	
	20 mg	0.012 mg	
	10 mg	0.010 mg	
	5 mg	0.010 mg	
	3 mg	0.0042 mg	
2 mg	0.0094 mg		
1 mg	0.0057 mg		

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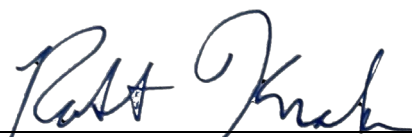
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Expanded Uncertainty ^{Note 3}	Remarks
Avoirdupois	1000 lb	4.7 g	Echelon III
	500 lb	2.4 g	
	50 lb	200 mg	
	25 lb	120 mg	
	20 lb	120 mg	
	10 lb	20 mg	
	5 lb	9.7 mg	
	3 lb	9.7 mg	
	2 lb	4.0 mg	
	1 lb	3.2 mg	
	0.5 lb	2.3 mg	
	0.3 lb	2.0 mg	
	0.2 lb	0.79 mg	
	0.1 lb	0.39 mg	
	0.05 lb	0.20 mg	
	0.03 lb	0.20 mg	
	0.02 lb	0.085 mg	
	0.01 lb	0.066 mg	
	0.005 lb	0.051 mg	
	0.003 lb	0.040 mg	
	0.002 lb	0.040 mg	
	0.001 lb	0.033 mg	
	8 oz	2.3 mg	
	4 oz	1.0 mg	
	2 oz	0.50 mg	
	1 oz	0.28 mg	
	1/2 oz	0.13 mg	
	1/4 oz	0.086 mg	
	1/8 oz	0.067 mg	
	1/16 oz	0.045 mg	
	1/32 oz	0.041 mg	

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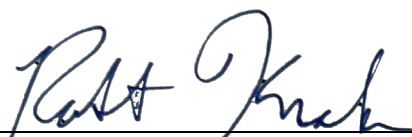
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CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) ^{Notes 1,2}

Measured Parameter or Device Calibrated	Range	Expanded Uncertainty ^{Note 3}	Remarks	
Weight Carts	2000 lb	0.11 lb	NIST HB 105-8	
	3000 lb	0.12 lb		
	3500 lb	0.14 lb		
	4000 lb	0.15 lb		
	4500 lb	0.15 lb		
	5000 lb	0.16 lb		
Rail Carts	6000 lb	0.25 lb		
	8000 lb	0.42 lb		
	10000 lb	0.31 lb		
VOLUME AND DENSITY (20/M12)				
Volume Transfer	1500 gal	38 in ³		Volume Transfer Method
	1000 gal	27 in ³		
	500 gal	15 in ³		
	100 gal	4.9 in ³		
	50 gal	2.8 in ³		
	25 gal	1.3 in ³		
	15 gal	0.51 in ³		
	5 gal	0.38 in ³		
	5 gal	0.29 in ³		
Liquefied Petroleum Gas Prover (LPG)	100 gal	5.2 in ³	Volume Transfer Method	
	25 gal	1.7 in ³		
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 with a level of confidence of approximately 95 %, typically using a coverage factor of $k = 2$. However, laboratories may report a coverage factor different than $k = 2$ to achieve the 95 % level of confidence. 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.

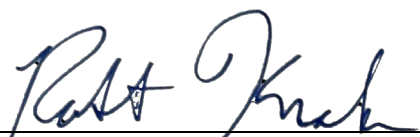
Note 3c: As described in Note 1, CMCs cover calibrations and measurements that are available to the laboratory's customers under *normal conditions*. However, the laboratory may have the capability to offer special tests, employing special conditions, which yield calibration or measurement results with 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.

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