



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

*Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:*

### ***ECS Metrology***

***3947 West Lincoln Highway, Downingtown, PA 19335***

*(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:*

### **ISO/IEC 17025:2017**

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

### ***Mechanical: Volumetric Pipette and Mass Calibration*** *(As detailed in the supplement)*

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen  
President/Operations Manager

*Initial Accreditation Date:*

September 29, 2017

*Issue Date:*

August 31, 2019

*Expiration Date:*

October 31, 2021

*Revision Date:*

June 24, 2020

*Accreditation No.:*

94034

*Certificate No.:*

L19-416-R1

Perry Johnson Laboratory  
Accreditation, Inc. (PJLA)  
755 W. Big Beaver, Suite 1325  
Troy, Michigan 48084

*The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: [www.pjllabs.com](http://www.pjllabs.com)*



# Certificate of Accreditation: Supplement

## ECS Metrology

3947 West Lincoln Highway, Downingtown, PA 19335  
Contact Name: Scott French Phone: 610-880-4170

Accreditation is granted to the facility to perform the following calibrations:

### Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Pipettes <sup>FO</sup>	0.2 $\mu$ L	0.11 $\mu$ L	High Resolution Micro Balances, Liquid Thermometers, and Evaporation Traps; WI: ECS SOP-001 IAW ISO 8655
	1 $\mu$ L	0.11 $\mu$ L	
	2 $\mu$ L	0.11 $\mu$ L	
	5 $\mu$ L	0.11 $\mu$ L	
	10 $\mu$ L	0.13 $\mu$ L	
	20 $\mu$ L	0.15 $\mu$ L	
	50 $\mu$ L	0.15 $\mu$ L	
	100 $\mu$ L	0.17 $\mu$ L	
	200 $\mu$ L	0.22 $\mu$ L	
	500 $\mu$ L	2.5 $\mu$ L	
	1 000 $\mu$ L	5 $\mu$ L	
	2 500 $\mu$ L	13 $\mu$ L	
	5 000 $\mu$ L	25 $\mu$ L	
10 000 $\mu$ L	50 $\mu$ L		

### Mass, Force, and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Balances <sup>O</sup>	10 mg to 60 g	$(2.0 \times 10^{-4} + 1.86 \times 10^{-6} \text{ Wt})\text{g}$	Class 1 Test Weights USP 41
	60 g to 200 g	$(1 \times 10^{-4} + 2.58 \times 10^{-6} \text{ Wt})\text{g}$	
	200 g to 5 kg	$(4.14 \times 10^{-3} + 2.03 \times 10^{-6} \text{ Wt})\text{g}$	

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor  $k$  (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.



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*Accreditation is granted to the facility to perform the following calibrations:*

3. The presence of a superscript FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations. Example: Outside Micrometer<sup>FO</sup> would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.
4. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.

