



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Particle Technology Labs
555 Rogers Street, Downers Grove, IL 60515

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

ISO/IEC 17025: 2005

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 Testing
(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

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

Initial Accreditation Date:

July 4, 2018

Issue Date:

July 4, 2018

Expiration Date:

October 31, 2020

Accreditation No.:

98927

Certificate No.:

L18-321

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.pjilabs.com



Certificate of Accreditation: Supplement

Particle Technology Labs

555 Rogers Street, Downers Grove, IL 60515
 Contact Name: Amy Ganden Phone: 630-969-2703

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

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Mechanical ^F	Particle Size	Particle Size Analysis - Laser Diffraction Methods	ISO 13320	0.02 µm to 3 500 µm
		Light Diffraction Measurement of Particle Size	USP <429>	
		Determination of Particle Size Distributions - Electrical Sensing Zone Method	ISO 13319	1 µm to 260 µm
		Particle size Analysis - Dynamic Light Scattering (DLS)	ISO 22412	10 nm to 1 µm
		Standard Guide for Particle Size Distribution of Nanomaterials in Suspension by Photon Correlation Spectroscopy (PCS)	E2490-09(2015)	
		Standard Guide for Particle Size Distribution of Nanomaterial in Suspension by Nanoparticle Tracking Analysis (NTA)	E2834-12	
		Test Sieves - Technical Requirements and Testing - Part 1: Test Sieves of Metal Wire Cloth	ISO 3310-1	45 µm to 35 000 µm (Mesh 325 to 1.25 in)
		Particle Size Distribution Estimation by Analytical Sieving	USP <786>	
	Specific Surface Area	Determination of the Specific Surface Area of Solids By Gas Adsorption (BET Method)	ISO 9277	0.1 m ² /g to 400 m ² /g
		Specific Surface Area	USP <846>	
	Pore Size Distribution & Porosity	Pore Size Distribution & Porosity of Solid Materials by Mercury Porosimetry and Gas Adsorption	ISO 15901-1	3 nm to 250 µm
			ISO 15901-2	1.7 nm to 300 nm
			ISO 15901-3	5 Å to 3 000 Å
Porosity by Mercury Intrusion		USP <267>	3 nm to 250 µm	
Particle Size and Shape	Image Particle Size Analysis - Image Analysis Methods: Static	ISO 13322-1	1 µm to 1 000 µm	



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Mechanical ^F	Density	Pigments and Extenders	ISO 787-10	N/A
		Pigments and Extenders: Determination of Tamped Volume and Apparent Density After Tamping	ISO 787-11	
		Bulk Density & Tapped Density of Powders	USP <616>	
		Density of Solids	USP <699>	
	Thermal Analysis	Plastics	ISO 11357-1	-150 °C to 600 °C
			ISO 11357-2	
			ISO 11357-3	
			ISO 11357-7	
			ISO 11358-1	Ambient to 1 000 °C

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer ^F would mean that the laboratory performs this testing at its fixed location.