



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Petroleum Analyzer Company, LP
8824 Fallbrook Drive, Houston, TX, 77064

(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):

Chemical 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

Initial Accreditation Date:

July 26, 2022

Issue Date:

March 16, 2023

Expiration Date:

July 31, 2025

Accreditation No.:

117975

Certificate No.:

L23-122

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.pjilabs.com



Certificate of Accreditation: Supplement

Petroleum Analyzer Company, LP

8824 Fallbrook Drive, Houston, TX, 77064
 Contact Name: Laji Isac Phone: 346-582-4355

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
Chemical ^F	Gas and Oil Analytical Instrumentation	Analytical Instrumentation Verification	ASTM 5453, ASTM D5504, ASTM D5623, ASTM D7011, ASTM D7183, ASTM D7551, ASTM D7359, ASTM D7994, ASTM D3241, EN 15486, IP 323, ISO 6249 ISO 19739, EN-ISO 20846, UOP 791	MultiTek, JFTOT: Electronics, Ellipsometry
	Jet Fuel	Thermal Oxidation – Jet Fuel	ASTM D3241, IP 323, ISO 6249, DEF STAN 91-091	JFTOT: Jet Fuel Thermal Oxidation Tester
	Oil and Gas	Elemental Analysis - Nitrogen	ASTM D4629, ASTM D5176	MultiTek: Chemiluminescence
		Elemental Analysis - Sulfur	ASTM D5453, EN-ISO 20846, ASTM D6667	MultiTek: UV Fluorescence, Ion Chromatography
		Freezing Point Analysis	ASTM D7153, MIL DTL - 5624V, ISO 3013	OptiFZP: Automatic Freezing Point Analyzer
	Oil and Gas, Diesel fuel/biofuels, Asphalt, Lubricants.	Viscosity	ASTM D7945, ASTM D445	ViscoSure, VP 2000, VP 2100, JFA-70Xi, MFA-70Xi, DFA-70Xi, HVM 472, HVU 481, HVU 482: Viscometer (Glass Capillary, Constant Pressure)
	Lubrication oils	Evaporation Loss of Lubricating Oils	ASTM D5800	NCK2 5G: Thermal Evaporation
	Used oils and lubricants	Viscosity	ASTM D7279	VH1, VH2: Glass Capillary
	Automotive and aviation gasoline	Vapor Pressure	ASTM D323, D4953, D5191EN13017, IP394, IP481	HVP-972: Vapor pressure at Temperature
	Petroleum products	Density	ASTM D4052	VIDA 40: Vibrational UTube
	Bitumen, pitch, tar, tall oil rosins, polymer resins	Softening point	ASTM D36	RB 36, HRB 754: Heated Liquid Bath

- 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.



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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):

Chemical, Electrical, Mass, Time and Frequency 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
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Certificate of Accreditation: Supplement

Petroleum Analyzer Company, LP

8824 Fallbrook Drive, Houston, TX, 77064

Contact Name: Laji Isac Phone: 346-582-4355

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

Chemical

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
PPM Nitrogen, Sulfur ^F	0 ppm to 20 ppm Concentration	1.2 ppm Concentration	CRM (Nitrogen, Sulfur), MultiTek Horizontal N
	0 ppm to 1 000 ppm Concentration	2.6 ppm Concentration	

Electrical

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
DC Voltage – Measure ^F	1 V to 10 V	0.007 V	Fluke 87V Multimeter
	10 V to 100 V	0.063 V	
	100 V to 1 000 V	1.7 V	

Mass

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
Atmospheric Pressure Correction ^F	0 kPa to 200 kPa	0.16 kPa	Handheld Manometer (M1)
System Pressure ^F	0 psi to 600 psi	4.3 psi	Pressure Gauge
Balance and Scale ^{1 F}	1 g to 200 g	0.02 g	ASTM Class 3 Weight
Volumetric Height Measuring Devices ^F	0 mm to 200 mm	0.23 mm	Volumetric Calibration Gauge (Steel, 5202-004-003)
Flow Rate ^F	SCCM 0 to 500 SCCM	0.58 SCCM	Flask, Timer

Thermodynamic

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
Temperature Circuit Simulation ^F	-50 °C to 0 °C	0.31 °C	Probe Simulators PS100, PS400 Temperature Probe Simulator Based on Resistance
	0 °C to 100 °C	0.22 °C	
	100 °C to 400 °C	0.65 °C	
PRT Probe ^F	-10 °C to 375 °C	0.22 °C	Fluke 9100s, Digital Thermometer with PRT Probe
Type K Thermocouple ^F	Up to 380 °C	0.59 °C	Reference Thermocouple



Certificate of Accreditation: Supplement

Petroleum Analyzer Company, LP

8824 Fallbrook Drive, Houston, TX, 77064

Contact Name: Matthew Berg Phone: 281-653-5031

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

Time and Frequency

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
RPM/Speed ^F	0 rpm to 500 rpm	0.64 rpm	Tachometer

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