



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

LABORATORY SERVICES, PETROTRIN
Southern Main Road
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CHEMICAL

Valid To: November 30, 2017

Certificate Number: 3896.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on Petroleum Products including Asphalts, Crude Oils and Distillate Fuels, Water and Wastewater utilizing the following test methods:

<u>Test Method</u>	<u>Test Identification</u>
ASTM D56	Standard Test Method for Flash Point by Tag Closed Tester
ASTM D86	Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure
ASTM D130	Standard Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test
ASTM D445	Standard Test Method for Kinematic Viscosity for Transparent and Opaque Liquids
ASTM D974	Standard Test Method for Acid and Base Number by Color-Indicator Titration
ASTM D1265	Standard Practice for Sampling Liquefied Petroleum (LP) Gases (Manual Method)
ASTM D1298	Standard Practice for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method
ASTM D1319	Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption
ASTM D1322	Standard Test Method for Smoke Point of Kerosene and Aviation Turbine Fuels
ASTM D1500	Standard Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)
ASTM D1837	Standard Test Method for Volatility of Liquefied Petroleum (LP) Gases

<u>Test Method</u>	<u>Test Identification</u>
ASTM D1838	Standard Test Method for Copper Strip Corrosion by Liquefied Petroleum (LP) Gases
ASTM D1840B	Standard Test Method for Naphthalene Hydrocarbons in Aviation Turbine Fuels by Ultraviolet Spectrophotometry
ASTM D2158	Standard Test Method for Residues in Liquefied Petroleum (LP) Gases
ASTM D2163	Standard Test Method for Analysis of Liquefied Petroleum (LP) Gases and Propane Concentrates by Gas Chromatography
ASTM D2386	Test Method for Freezing Point of Aviation Fuels
ASTM D2624	Standard Method for Electrical Conductivity of Aviation and Distillate Fuels
ASTM D3227	Standard Test Method for (Thiol Mercaptan) Sulfur in Gasoline, Kerosene, Aviation Turbine & Distillate Fuels (Potentiometric Method)
ASTM D3241	Standard Test Method for Thermal Oxidation Stability of Aviation Turbine Fuels (JFTOT Procedure)
ASTM D3242	Standard Test Method for Acidity in Aviation Turbine Fuel
ASTM D3338	Test Method for Estimation of Net Heat of Combustion of Aviation Fuels
ASTM D3606	Standard Test Method for Benzene in Finished Motor and Aviation Gasoline by Gas Chromatography
ASTM D3700	Standard Practice for Containing Hydrocarbon Fluid Samples Using a Floating Piston Cylinder
ASTM D3948A	Standard Test Method for Determining Water Separation Characteristics of Aviation Turbine Fuels by Portable Separometer
ASTM D4052	Standard Test Method for Density and Relative Density of Liquids by Digital Density Meter
ASTM D4294	Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectroscopy
ASTM D4629	Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe / Inlet Oxidative Combustion and Chemiluminescence Detection
ASTM D4815	Standard Test Method for Determination of MTBE in Gasoline by Gas Chromatography
ASTM D5452	Standard Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration



<u>Test Method</u>	<u>Test Identification</u>
ASTM D5453	Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence
ASTM D5972	Standard Test Method for Freezing Point of Aviation Fuels (Automatic Phase Transition Method)
ASTM D6045	Standard Test Method for Color of Petroleum Products by the Automatic Tristimulus Method
ASTM D6667	Standard Test Method for Total Volatile Sulfur in Gaseous Hydrocarbons and Liquid Petroleum Gases by Ultraviolet Fluorescence
IP 170 / ISO 13736	Determination of Flash Point – Abel Closed-cup Method
IP 391 / ASTM D6591	Total Hydrocarbon Types in Diesel Fuels and Distillates – High Performance Liquid Chromatography Refractive Index Detection Method
IP 470	Determination of Aluminum, Silicon, Vanadium, Nickel, Iron, Calcium, Zinc, and Sodium by Ashing, Fusion and Atomic Absorptions Spectroscopy
IP 540	Determination of the Existent Gum Content of Aviation Turbine Fuel – Jet Evaporation Method
IP 565	Determination of the Level of Cleanliness of Aviation Turbine Fuel – Portable Automatic Particle Counter Method
UOP481	Water in Liquid Hydrocarbons by MicroCoulometry
SM 2320 B	Standard Method for the Measurement of Alkalinity
SM 2540D	Standard Method for Total Suspended Solids Dried at 103 – 105°C
SM 4500 - H ⁺	Standard Method for pH Value
SM 4500 - NH ₃ , B, C	Standard Method for the Measurement of Nitrogen as Ammonia in Water and Waste Water
SM 4500 - S(-2) B, C, F	Standard Method for the Measurement of Sulfide in Water and Waste Water
SM 5530 Phenols	Standard Method for the Measurement of Phenols in Water and Waste Water
SM 4500 Cl ⁻ B, D	Standard Method for the Measurement of Chloride in Water and Waste Water
SM 5220 D / HACH 8000	Chemical Oxygen Demand (COD) – Closed Reflux Colorimetric Method
SM 2510 B	Standard Method for Conductivity in Water.
HACH 8027	Cyanide Pyridine – Pyrazolene Method



<u>Test Method</u>	<u>Test Identification</u>
HACH 8023	Hexavalent Chromium Method
EPA 1664	n-Hexane Extractable Material (HEM) and Silica Gel Treated n-Hexane Extractable material (SGT-HEM) by Extraction and Gravimetry (Oil and Grease and total Petroleum Hydrocarbons)





Accredited Laboratory

A2LA has accredited

LABORATORY SERVICES, PETROTRIN

Trinidad, TRINIDAD & TOBAGO

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 29th day of October 2015.

A handwritten signature in black ink, appearing to be "L. S. S.", written over a horizontal line.

President & CEO
For the Accreditation Council
Certificate Number 3896.01
Valid to November 30, 2017
Revised November 29, 2017

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.