



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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CHEMICAL

Valid To: January 31, 2013

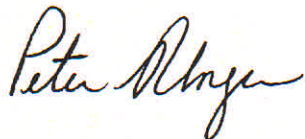
Certificate Number: 2705.01

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, fuels and fuel additives (oil, diesel, gasoline, biodiesel, ethanol and oxygenates) for chemical parameters and physical properties.

<u>Test Description</u>	<u>Test Method(s)</u>
Distillation of Petroleum Products at Atmospheric Pressure	ASTM D86
Flash Point by Pensky-Martens Closed Cup Tester	ASTM D93
Pour Point of Petroleum Products	ASTM D97
Corrosiveness to Copper from Petroleum Products by Copper Strip Test	ASTM D130
Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter	ASTM D240
Gum Content in Fuels by Jet Evaporation	ASTM D381
Kinematics Viscosity of Transparent and Opaque Liquids	ASTM D445
Ash from Petroleum Products	ASTM D482
Ramsbottom Carbon Residue of Petroleum Products	ASTM D524
Oxidation Stability of Gasoline (Induction Period Method)	ASTM D525
Cetane Number of Diesel Fuels	ASTM D613
Acid Number of Petroleum Products by Potentiometric Titration	ASTM D664
Corrosiveness to Iron from Petroleum Products	ASTM D665
Calculated Cetane Index of Distillate Fuels	ASTM D976
Acidity of Hydrocarbon Liquids and Their Distillation Residues	ASTM D1093
Electrical Conductivity of Ethanol, Denatured Fuel Ethanol, and Fuel Ethanol Blends (1,000 to 20,000,000 u/S/m)	ASTM D1125 ^a and Paragon SOP-A0221
Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption (FIA)	ASTM D1319

<u>Test Description</u>	<u>Test Method(s)</u>
Acidity of Volatile Solvent and Chemical Intermediates (Acidity as Acetic Acid or as Formic Acid)	ASTM D1613
Water and Sediment in Fuel Oils by the Centrifuge Method	ASTM D1796
Oxidation Stability of Distillate Fuel Oil (Accelerated Method)	ASTM D2274
Cloud Point of Petroleum Oils	ASTM D2500
Electrical Conductivity of Aviation and Distillate Fuels (1 to 2,000,000 pS/m)	ASTM D2624
Research Octane Number of Spark-Ignition Engine Fuel	ASTM D2699
Motor Octane Number of Spark-Ignition Engine Fuel	ASTM D2700
Water and Sediment in Middle Distillate Fuels by Centrifuge	ASTM D2709
Phosphorus in Gasoline	ASTM D3231
Lead in Gasoline by Atomic Absorption Spectrometry (AAS)	ASTM D3237
Estimation of Heat of Combustion of Aviation Fuels	ASTM D3338
Estimation of Hydrogen Content of Aviation Fuels	ASTM D3343
Peroxide Number of Aviation and Distillate Fuels	ASTM D3703
Manganese in Gasoline by Atomic Absorption Spectrometry (AAS)	ASTM D3831
Density and Relative Density of Liquids by Digital Density Meter	ASTM D4052
Trace Nitrogen in Petroleum Products by Syringe Inlet Oxidative Combustion and Chemiluminescence Detection	ASTM D4629
Calculated Cetane Index by Four Variable Equation	ASTM D4737
Calculation of Drivability Index from Specification for Automotive Spark-Ignition Engine Fuel	ASTM D4814
Corrosiveness to Silver from Petroleum Products by Silver Strip Test	ASTM D4814 (Annex A1)
Determination of MTBE, ETBE, TAME, DIPE, tertiary-Amyl Alcohol and C ₁ to C ₄ Alcohols in Gasoline by Gas Chromatography	ASTM D4815
Vapor Pressure of Petroleum Products (Mini Method)	ASTM D5191
Instrumental Determination of Carbon and Hydrogen in Petroleum Products and Lubricants	ASTM D5291
Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence	ASTM D5453
Ethanol Content of Denatured Fuel Ethanol and Fuel Ethanol Blends Dimethylhexadiene (DMHD) in Gasoline	ASTM D5501 ASTM D5501 ^a and Paragon SOP-A0227
Total Oxygen of Petroleum Products by Reductive Pyrolysis	ASTM D5622
Evaluating Lubricity of Diesel Fuels by the High-Frequency Reciprocating Rig (HFRR)	ASTM D6079
pH of Ethanol, Denatured Fuel Ethanol, and Fuel Ethanol Blends	ASTM D6423
Water in Liquid Petroleum Products using Volumetric Karl Fischer Titration	ASTM E203
Color by Visual Description	Paragon SOP-A0214

^a While the scope and application of the cited ASTM method does not address the specific test parameter tested by Paragon, the method was modified to address the parameter in the cited Paragon standard operating procedure (SOP), which follows the ASTM method.





World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

PARAGON LABORATORIES, INC.

Livonia, MI

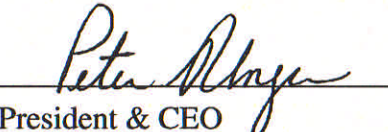
for technical competence in the field of

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 11th day of July 2011.





Peter Abney

President & CEO
For the Accreditation Council
Certificate Number 2705.01
Valid to January 31, 2013

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