SCOPE OF ACCREDITATION TO ISO/IEC 17043:2023

ASTM INTERNATIONAL
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PROFICIENCY TESTING PROVIDER

Valid To: May 31, 2029 Certificate Number: 4209.01

In recognition of the successful completion of the A2LA evaluation process, this proficiency testing provider has been found to meet ISO/IEC 17043:2023, "Conformity assessment – General requirements for the competence of Proficiency Testing Providers". Accreditation is granted to this provider to provide proficiency testing samples in the following programs:

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Automatic Lubricant Additives		
D664	Acid Number - Total	Lubricant Additive for an Automatic engine.
D4628, D4951, D5185	Additive Elements	
D482	Ash	
D874	Ash Sulfated	
D2896, D4739	Base Number	
, D4052	Density	
D92, D93	Flash Point	
D5291	Nitrogen	
D1552	Sulfur Content	
D445	Viscosity, Kinematic	
D6304	Water by KF	
Automatic Transmission Fluid		
D974	Acidity	Transmission fluid used in an automatic engine.
D664	Acid Number - Total	
D4951, D5185	Additive Elements	
D287	API Gravity	
D2896, D4739	Base Number	
D1500	Color	
D130	Copper Corrosion	
D1298, D4052	Density	
D93, D92	Flash Point	
D6082, D892	Foaming	
D665	Rust Prevention	
D445	Viscosity Kinematic	
D2983	Viscosity, Low Temperature	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Base Oil		
D664	Acid Number	Base Oil
D611	Aniline Point	
D482	Ash Content	
D189, D524	Carbon Residue	
D2007, D7419	Clay-Gel Absorption	
D1500, D6045	Color	
D130	Copper Strip	
D1298, D4052	Density	
D2887, D6352, D7500	Distillation	
D5800, D6375	Evaporation Loss	
D92, D93	Flash Point	
D5762	Nitrogen by Boat Inlet	
D97, D5950, D5949, D6749	Pour Point	
D1218, D1747	Refractive Index	
D2622, D4294, D5453	Sulfur	
D5293	Viscosity/Cold Crank Simulator	
D445, D2270, D7042	Viscosity, Kinematic	
D6417	Volatility	
D6304, D1401	Water	
Biodiesel		
D664, D974	Acidity	Biodiesel (B100)
D482, D874	Ash	
D4530, D189	Carbon Residue	
D2500, D5771, D5773, D7397	Cloud Point	
D6371	Cold Filter Plugging Point	
D130	Corrosion	
D1298, D4052	Density	
D1160	Distillation	
EN14538, D5185	FAME: Ca, Mg, Na, K by ICP	
EN14103	FAME: Linolenic Methyl Ester	
EN14110	FAME: Methanol Content	
EN14112	FAME: Oxidation Stability	
EN15751	FAME: Oxidation Stability	
D7501	Filtration, Cold Soak (CSFT)	
D93, D3828	Flash Point	
D6584	Glycerin	
D6079, D7688	Lubricity	
D7321	Particulate Contamination	
D4951	Phosphorus	
D6428, D5453, D7039	Sulfur	
D6468	Thermal Stability	
D445, D2270, D7042	Viscosity, Kinematic	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Biodiesel (cont).		
D2709	Water and Sediment	Biodiesel (B100)
D6304, E203	Water by KF	
Biodiesel Blend		
D664	Acidity	6% to 20% Biodiesel (B100) blended with No. 2 Diesel Fuel
D482	Ash	
D7371, D7861, EN14078	Biodiesel Content	
D524	Cardon Residue	
D976	Cetane Index	
D613	Cetane Number	
D2500, D5771, D5773, D7397, D7683	Cloud Point	
D6371	Cold Filter Plugging Port	
D2464	Conductivity	
D130	Corrosion	
D1298, D4052	Density	
D86, D7345	Distillation	
D5185, EN 14538	Elemental Analysis	
D93	Flash Point	
D4539	Low Temperature Flow Test	
D6079	Lubricity	
EN15751	Oxidation Stability	
D5949, D5950, D5985, D6749, D6892, D7346	Pour Point	
D2622, D4294, D5453, D7220	Sulfur	
D445	Viscosity, Kinematic	
D2709	Water and Sediment	
D6304, D6428, E203	Water by KF	
Cetane		
D613	Cetane Number	Diesel Fuel
D6890	Derived Cetane Number by Combustion in a Constant Volume Chamber	
D7170	Derived Cetane Number – Fixed Range Injection Period, Constant Volume Combustion Chamber Method	
D7668	Derived Cetane Number Using Constant Volume Combustion Chamber Method	
D1298, D4052	Density, Digital	
D86	Distillation	
D93	Flash Point	
D1319	Hydrocarbon Type	
D8183	Indicated Certain Number	
D2622, D5453, D7039	Sulfur by WDXRF	
D445	Viscosity, Kinematic	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Crude Oil		
D664, D8045	Acid Number - Total	Crude Oil
D6560	Asphaltenes	
D1298, D5002, D287	Density, Relative Density or API Gravity	
D7169	High Temperature Simulated Distillation	
D5708, D5863	Metals, (Vanadium, Nickel, Iron)	
D4530	Micro Carbon Residue	
D4629, D5762	Nitrogen, Total	
D4929, D8150	Organic Chloride	
D97, D5853	Pour Point	
D323, D5191, D6377	Reid Vapor Pressure	
D3230, D6470	Salt	
D473, D4807	Sediment	
D2622, D4294	Sulfur	
D445, D7042	Viscosity, Kinematic	
D4006, D4928, D4377, D4007	Water	
Diesel Fuel		
D974, D664	Acid and Base Number	Diesel Fuel
D482	Ash	
D5291	Carbon, Hydrogen and Nitrogen	
D189, D524, D4530	Carbon Residue	
D2500, D5771, D5772, D5773, D7689	Cloud Point	
D976, D4737	Cetane Index	
D1500, D6045	Color	
D6371	Cold Filter Plugging Point	
D130	Copper Corrosion	
D1298, D4052, D7777	Density	
D6890, D7094, D7170	Derived Cetane Number	
D86, D2887, D7345	Distillation	
D8110	Elemental Analysis	
D2624	Electrical Conductivity	
D93, D3828, D6450	Flash Point	
D240	Heat Content	
D6468	High Temp Stability	
D1319, D5186, D6591	Hydrocarbon Type	
D8183	Indicated Cetane Number	
D6079, D7688	Lubricity (HFRR)	
D4629, D5762	Nitrogen	
D7346	No Flow Point	
D7545	Oxidation Stability	
D6217	Particulate Contamination by Filtration	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Diesel Fuel (cont)		
D97, D5949, D5950, D6749	Pour Point	Diesel Fuel
D2622, D4294, D5453, D7039, D7220	Sulfur Content	
D445, D7042	Viscosity, Kinematic	
D1796, D2709	Water and Sediment	
D6304	Water by KF	
Distillers Dried Grain with Solubles		
NFTA 2.1.4	Moisture	Distillers dried grain with solubles as a by-product of ethanol production
AOAC 990.03 and AOAC 2001.11	Crude Protein	
AOAC 945.16	Crude Fat	
AOAC 978.10	Crude Fiber	
AOAC 2002.04 and ISO 16472	Amylase-treated Neutral Detergent Fiber (NDF)	
AOAC 973.18 and ISO 13906	Acid Detergent Fiber (ADF)	
AOAC 942.05 and ISO 5984	Ash	
AOAC 923.01 and ISO 27084	Sulfur, Particle Size, Color – L, a, and b, pH, Water Activity, Loose Bulk Density	
AOAC 2005.08, AOCS Aa11-05, AOAC 991.31, AOCS Ab 7-91, AOAC 986.18, AOCS Aj 5a-97, AOCS Aj 2-86, ISO 17372	Rapid Test Kits Mycotoxins	
Engine Oil Lubricants		
D6278	Shear Stability	Engine Oil Lubricants
D664, D974	Acid Number	
D4628, D4927, D4951, D5185, D6443, D6481	Additive Elements	
D482	Ash	
D874	Ash Sulfated	
D2896, D4739	Base Number	
D1298, D4052	Density	
D5800	Evaporating Loss	
D92, D93	Flash Point	
D5481	HTHS Viscosity	
D3228, D4629, D5291, D5762	Nitrogen	
D6749, D97, D5949, D5950,	Pour Point	
D94	Saponification Number	
D129, D2622, D5453	Sulfur Content	
D445, D7042, D7279	Viscosity, Kinematic	
D4741	Viscosity, Tapered Plug	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Engine Oil Lubricants (cont).		
D4683	Viscosity, Tapered Bearing	Engine Oil Lubricants
D4684, D5133, D5293	Viscosity, Low Temperature	
D6417	Volatility	
D6304	Water	
D1744	Water Content	
D1500, D6045 (D1500)	Color	
D6375	Evaporation Loss by TGA Noack Method	
D7346	Pour Point, No Flow Point	
Engine Coolants		
D1122	Specific Gravity by Hydrometer	Engine Coolant
D1121	Reserve Alkalinity	
D6130	Silicon and Other Elements	
D1177, D6660	Freezing Point	
D3321	Field Test Determination of Freezing Point	
D1123, E203	Water by Karl Fischer-Method A: Manual; Method B: Automatic	
D1384	Corrosion Test (Copper, Solder, Brass, Steel, Cast Iron, Aluminum)	
D1287	pH	
D1881	Foam Tendencies-Foam volume at 5 minutes; Break time appearance of Eye	
D4921	Foaming Tendencies	
D3634	Trace Chloride	
D5931	Density by Digital Density Meter	
D1119	Percent Ash Content	
D6129	Silicon by AAS	
D1120	Boiling Point	
D4340	Corrosion of Cast Aluminum Alloys	
D5827	Ion Chromatography	
D7304	Denatonium Ion	
Fuel Ethanol		
D1613, D7795	Acidity	Denatured Fuel Ethanol
D1688 per D4806	Copper Content	
D5501	Ethanol/Methanol	
D7319, D7328	Inorganic Chloride	
D6423	pH	
D381	Solvent Washed Gum	
D4052	Specific Gravity	
D7319, D7328	Sulfate Content	
D5453, D7039	Sulfur	
E203, E1064, D7923	Water	
Fuel Oil No. 6		
D664	Acid Number	No. 6 Fuel Oil
D5184	Aluminum and Silicon	
D287	API Gravity	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Fuel Oil No. 6 (cont).		
D482	Ash	
D6560	Asphaltenes	No. 6 Fuel Oil
D189, D4530, D524	Carbon Residue	
D1298, D4052	Density	
D93	Flash Point	
D7060	Flocculation Ratio and Peptizing Power	
D240	Heat Content	
D5291	Hydrogen	
D3279, D7061	Insolubles	
D5185	Metals/Wear Contaminants	
D3228, D4629, D5762	Nitrogen	
D97, D5853, D5950	Pour Point	
D473, D4870	Sediment	
D4740	The Spot Test	
D7112, D7157	Stability and Compatibility	
D2622, D4294	Sulfur Content	
D1548, D5708, D5863	Vanadium, Nickel, Iron, Sodium	
D445, D7042	Viscosity, Kinematic	
D1796	Water and Sediment	
D95	Water by Distillation	
D6304	Water by Coulometric KF	
Gear Oil		
D4951, D5185	Additive Elements	Gear Oil in the 75W to 90 range
D287	API Gravity	
D874	Ash Sulfated	
D130	Copper Corrosion	
D92, D93	Flash Point	
D97, D5949, D5950	Pour Point	
D4294, D6481	Sulfur Content	
D445	Viscosity, Kinematic	
D2983	Viscosity, Low Temperature	
General Gas Oil		
D664	Acid Number	General Gas Oil such as Vacuum, Coker or Atmospheric
D611	Aniline Point	
D482	Ash	
D1159	Bromine Number	
D1500, D6045	Color	
D4530, D189	CCR - Carbon Residue	
D4052, D287, D1298	Density/API	
D1160, D2887, D6352, D7169	Distillation	
D93	Flash Point	
D5863, D5708	Metals, V, Ni, Fe, Na	
D97, D5950, D5853	Pour Point	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
General Gas Oil (cont).		
D2622, D4294	Sulfur	General Gas Oil such as Vacuum, Coker or Atmospheric
D5762	Total Nitrogen	
D4629	Trace Nitrogen	
D445	Viscosity, Kinematic @ 100°C	
Hemp Flower		
	Cannabinoids (Potency)	Ground and Whole Hemp Flower
	Terpenes	
	Pesticides	
	Metals	
	Mycotoxins	
	Moisture	
	Water Activity	
Hydraulic Fluids & Oils		
D664, D974	Acid Number	Hydraulic Fluids and Oils such as Mineral Oil based, Synthetic Ester (HEES) or Water-glycol Based
D3427	Air Release	
D2896, D4739	Base Number	
D130	Cu+ Corrosion	
D4052	Density	
D5185, D4951	Elements by ICP	
D92	Flash Point	
D892	Foaming Characteristics	
D2272	Oxidation Stability	
D5949	Pour Point	
E70	pH @ 25ºC	
D665	Rust Prevention	
D2619	Stability, Hydrolytic	
D445	Viscosity, Kinematic	
D2070	Thermal Stability	
D1401	Water Separability	
D97, D5950, D6749	Pour Point	
Industrial Gear Oil		
D2711	Demulsibility	Industrial Gear Lubricant
D92, D93	Flash Point	
D892	Foam Tendency	
D2783	4-Ball EP	
D4172	4-Ball Wear	
D3233	Pin and V-block	
D97, D5949	Pour Point	
D665	Rust Preventions	
D2782	Timken EP	
D445, D7042	Viscosity, Kinematic	
D1401	Water Separability	
D2670	Wear Properties	
D130	Cu+ Corrosion	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
In-Service Oil Monitoring Hydraulic Fluids & Oils (cont)		
D664, D974	Acid Number	In-Service (Used) Mineral Oil based Hydraulic Fluid
D974, D2896, D4739	Base Number	
D92,	Flash Point	
D2982, D4291	Glycol Detection	
D5185, D6595	Metal/Wear Contaminants	
D7647	Particle Count	
D445	Viscosity, Kinematic	
D95	Water by Distillation	
D1744, D6304	Water by KF	
In-Service Diesel Lubricating Oil Monitoring		
D664, D8045	Acid Number	In-Service (Used) Diesel Engine Lubricating Oil
D2896, D4739	Base Number	
D7689	Cloud Point	
D92, D93, D3828	Flash Point	
D3524, D7593	Fuel Dilution	
D2982, D4291	Glycol	
D7279	Houillon Kinematic Viscosity	
D893, D4055	Insolubles	
D5185, D6595	Metal/Wear Contaminants	
D7624	Nitration, FT-IR	
D7214, D7414	Oxidation, FT-IR	
D7412	Phosphate, FT-IR, FT-IR Soot Loading, Water Contamination	
FT-IR	Soot Loading, Water Contamination	
D7415	Sulfate, FT-IR	
D445, D7042	Viscosity, Kinematic	
D2270	Viscosity Index	
D6304, D1744	"Crackle Test", Water Content	
Insulated Fluid Quality		
D664, D974	Acid Number	Mineral Oil based Insulating Fluid
D611	Aniline Point	
D1500	Color	
D1298, D4052	Density	
D877, D1816	Dielectric	
D92, D93	Flash Point	
D5837	Furans	
D971	Interfacial Tension	
D2668, D4768	Oxidation Inhibitor	
D2112	Oxidation Stability	
D6786	Particle Count	
D924	Power Factor (25ºC and 100ºC)	
D97, D5950, D6749	Pour Point	
D1169	Resistivity	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Insulated Fluid Quality (cont.)		
D1275	Sulfur Corrosive	Mineral Oil based Insulating Fluid
D7151	Trace Metals	
D1533, D6304	Water Content	
Jet Fuel (Aviation Turbine Fuel)		
D3242	Acidity	Aviation Turbine Jet-A Fuel
D5001	BOCLE Lubricity	
D976	Calculated Cetane Index	
D156, D6045	Color	
D3338, D4529, D4809	Combustion, Net Heat	
D130	Copper Corrosion	
D1298, D4052	Density	
D86, D2887, D7345	Distillation	
D2624	Electrical Conductivity	
D56, D93, D3828	Flash Point	
D2386, D5972, D7153, D7154	Freeze Point	
D5006	Fuel System Icing Inhibitors (FSII)	
D381, IP540	Gum	
D1319, D5186, D6379, D8267	Hydrocarbon Type	
D3701, D3343	Hydrogen Content	
D3227	Mercaptan Sulfur	
D1840	Naphthalenes	
D1322	Smoke Point	
D2622, D4294, D5453, D7039	Sulfur Content	
D3241	Thermal Stability	
D445, D7042, D7945	Viscosity, Kinematic	
D3948, D7224	Water Separation	
Jet Military Fuel F24		
D3242	Acidity	Military Aviation F24 Fuel
D5001	BOCLE Lubricity	
D976, D4737	Calculated Cetane Index	
D130	Copper Strip Corrosion	
D1298, D4052	Density, or API Gravity	
D86, D2887, D7345	Distillation	
D4952	Doctor Test	
D2624	Electrical Conductivity	
D93, D3828, D56	Flash Point	
D4176	Free Water Particulate Contamination	
D2386, D5972, D7153, D7154	Freezing Point	
D5006	Fuel Systems Icing Inhibitor (Ether Type)	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Jet Military Fuel F24 (cont)		
D381	Gum Content in Fuels by Jet Evaporation	Military Aviation F24 Fuel
D1319	Hydrocarbon Types	
D3701, D3343, D7171	Hydrogen Content	
D445, D7042	Kinematic Viscosity at -20°C	
D1840	Naphthalenes Hydrocarbons	
D3338, D4809, D4529	Net Heat of Combustion, MJ/kg BTU/lb	
D2276, D5452	Particulate Contaminant	
D156, D6045	Saybolt Color of Petroleum Products	
D1322	Smoke Point	
D3227	Sulfur, Mercaptan	
D129, D1266, D2622, D3120, D4294, D5453, D7039	Sulfur, Total Percent	
D3241	Thermal Oxidation Stability	
D1094	Water Reaction, Interface Rating	
D3948, D7224	Water Separation Index	
Liquefied Petroleum Gas		
D2163	Hydrocarbons by GCV (Compositional Testing)	Liquefied Petroleum Gas
D5504	Sulfur by GC and Chemiluminescence	
D5623	Sulfur by GC	
D6667	Total Volatile Sulfur	
D7423	Oxygenates by GC-FID (contaminants testing)	
D7994	F, Cl, S by Combustion IC	
Lubricating Grease		
D217, D1403, D7342	Cone Penetration (¼ & ½ scale)	Lubricating Grease
D4048	Copper Corrosion	
D1743	Corrosion Preventative Properties	
D566, D2265	Dropping Point (Wide temperature range)	
D6138	Dynamic Rust Test (Emcor)	
D972	Evaporation Loss	
D2596	Extreme Pressure Prop. (Timken, 4-Ball)	
D4170	Fretting Wear Protection	
D3527	High Temp Life Performance	
D4290	Leakage Tendencies	
D2509	Load Carry Capacity	
D1742, D6184	Oil Separations	
D5483	Oxidation Induction Time	
D942	Oxidation Stability	
D1831, D8022	Roll Stability	
D4049	Water Spray	
D1264	Water Washout	
D2266, D4170	Wear, 4-Ball	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Mechanical Testing of Metals		
E8/E8M	Tension Test	Carbon steel zinc coated, Stainless steel annealed, Carbon steel electrogalvanized or Aluminum uncoated
E18	Hardness Test	
E6464	Tensile Strain Hardening exponents (n-values) or metallic sheet materials.	
E517	Plastic strain ration (r-value) for sheet material	
Motor Gasoline		
D3606, D4053, D5580, D5769, D6277	Benzene, Toluene, C9, Aromatics	Motor Gasoline
D130	Copper Corrosion	
D1298, D4052	Density	
D86, D7096, D7345	Distillation	
D381	Gum	
D1319, D5443, D6839, D8071	Hydrocarbon Type	
D3237	Lead Content	
D3227	Mercaptan Sulfur	
D6550	Olefin Content	
D525, D7525	Oxidation Stability	
D5599, D5845, D4815, D7754	Oxygenates	
D3231	Phosphorus Content	
D2622, D5453, D7039	Sulfur Content	
D5188	Vapor/Liquid Ratio	
D5191, D6378	Vapor Pressure	
Naphtha		
D1159	Bromine Number	Naphtha used as a gasoline blending component
D5194, D5808	Chloride in Aromatic Hydrocarbons	
D6045	Color	
D130	Copper Strip Corrosion	
D1298, D4052	Density, API Gravity	
D5134	Detailed Hydrocarbon Analysis	
D86	Distillation	
D8110	Elemental Analysis	
D1319, D6839, D8071	Hydrocarbon Types	
D6729, D6730	Individual Components by GC	
D3227	Mercaptan Sulfur	
D4629	Nitrogen, Trace	
D5443	Aromatic Hydrocarbons Type	
D2887	Simulated Distillation	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Naphtha (cont)		
D2622, D4294, D5453, D7039	Sulfur, Total Percent	Naphtha used as a gasoline blending component
D5191	Vapor Pressure	
Petroleum Wax (cont)		
D156, D6045, D1500, D2008	Color	Petroleum Wax
D938	Congealing Point	
D1298, D4052	Density	
D92	Flash Point	
D87, D127	Melting Point	
D1321	Needle Penetration @ 25 and 40°C	
D721	Oil Content	
D445	Viscosity, Kinematic @ 100°C	
D1833	Odor	
D3235	Solvent Extractables	
Polypropylene		
D6290	Color Determination of Plastic Pellets: Yellowness Index	Homopolymer and Copolymer Polypropylenes
ISO 179 -1	Charpy Impact Resistance (Notched Impact)	
D648	Deflection Temperature Under Load	
D790, ISO 178	Flexural Properties of Plastics	
D1238	Flow Rates of Thermoplastics by Extrusion Plastometer	
D256	Izod Impact Resistance (Notched Specimens)	
ISO 1133	Melt-Flow Rate	
D638, ISO 572-2	Tensile Properties of Plastics	
D5492, ISO 16152	Xylene Solubles	
ISO 75-1&2	Temperature of Deflection Under Load	
Reformulated Gasoline		
D287	API Gravity	Reformulated Gasoline
D3606, D5580, D5769, D6277	Benzene, Toulene, C_9 Plus Aromatics	
D1298, D4052	Density	
D86, D7345	Distillation	
D381	Gum	
D1319, D5443, D6839, D8071	Hydrocarbon Type	
D6550	Olefin Content	
D4815, D5599, D5845	Oxygenates	
D2622, D5453, D7039	Sulfur Content	
D5188	Vapor/Liquid Ratio	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Reformulated Gasoline (cont)		
D5191, D6378	Vapor Pressure	
Thermal Analyses of Plastics		
D3418	Polymers by Differential Scanning Calorimetry (DSC)	LLDPE, PP, PBT, PPS AND PEEK Resins
D3895	Scanning Calorimetry (OIT by DSC)	
D3850, E1131	Thermogravametric Method (TGA)	
Transportable Moisture Limit of Coal		
IMSBC Code Appendix 2 Section 1.5 Modified	Proctor Fagerberg Test procedure for Coal	Reconstituted Coal
AS 1289.3.5.1:2006	Methods of testing soils for engineering purposes	
Method 3.5.1	Soil classification tests – Determination of the soil particle density of a soil – Standard Method	
ISO 589:2008	Hard Coal – Determination of Total Moisture	
Turbine Oil		
D974	Acidity	Turbine Oil
D3427	Air Release	
D130	Copper Corrosion	
D2711	Demulsibility	
D92, D93	Flash Point	
D892	Foam	
D4172	4-Ball Wear	
D2272	Oxidation Stability	
D97, D5949, D5950, D7346	Pour Point	
D665	Rust Prevention	
D445	Viscosity, Kinematic	
D1401	Water Separability	
D6304	Water Content	
Ultra-Low Sulfur Diesel Fuel		
D2622	Sulfur in Petroleum Products by WDXRF	Ultra-Low Sulfur Diesel Fuel
D5453	Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence	
D7039	Sulfur in Gasoline and Diesel Fuel by Monochromatic WDXRF	
D7220	Test Method for Sulfur in Automotive, Heating, and Jet Fuels by Monochromatic Energy Dispersive X-ray Fluorescence Spectrometry	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Diesel Exhaust Fluids		
ISO 3675, ISO 12185	Density	Diesel Exhaust Fluid
ISO 22241-2 Annex B/C	Urea Content Refractive Index	
ISO 22241-2	Urea Content (Total Nitrogen)	
ISO 22241-2 Annex C	Refractive Index at 20c	
ISO 22241-2 Annex D	Alkalinity as NH3	
ISO 22241-2 Annex E	Biuret Content	
ISO 22241-2 Annex F	Aldehydes Content	
ISO 22241-2 Annex G	Insoluble Matter Content	
ISO 22241-2 Annex H	Phosphate (PO4)	
ISO 22241-2 Annex I	Ca, Fe, Cu, Zn, Cr, Ni, Al, Mg, Na, K	
ISO 22241-2 Annex J	Identity (FTIR)	
D7821	Urea Concentration	
Aromatic Hydrocarbons		
Mixed Xylene Test: D848	Acid Wash Color	Aromatic Hydrocarbons Benzene, Mixed Xylene and para-Xylene
D847	Acidity	
D4534, D6229, D7360	Benzene	
D1492, D5776	Bromine Index	
D3505-12el	Test Method for Density or Relative Density of Pure Liquid Chemicals	
D8005	Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)	
D5194, D7359, D7457, D7536, D5808	Chloride	
D1209, D5386	Color	
D849	Copper Corrosion	
D3505, D4052	Density	
D6563, D2360, D7504, D5917	GC p-Xylene ONLY:	
D850	Distillation	
D5917, D3798, D7504	GC	
D6069, D4629, D7184	Nitrogen	
D6212, D6428, D6313, D7183,	Sulfur Benzene ONLY:	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Aromatic Hydrocarbons (cont)		
D4492, D5713, D7504	GC	Aromatic Hydrocarbons Benzene, Mixed Xylene and para-Xylene
D4735, D7011	Thiophene	
D6304, E1064, D7375	Water	
Dissolved Gas Analysis		
D1533	Standard Test Method for Water in Insulating Liquids by Coulometric Karl Fischer Titration	Gassing Transformer Oil
IEC 60567	Free Dissolved Gases	
D3612	Standard Test Method of Analysis of Gases Dissolved in Electrical Insulating Oil by Gas Chromatography	
Plain Carbon & Low- Alloy Steel		
E350	Standard Test Method for Chemical Analysis of Carbon Steel, Low Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron1	Plain Carbon Steel and Low-Alloy Steel
E415	Standard Test Method for Analysis of Carbon and Low- Alloy Steel by Spark Atomic Emission Spectrometry	
E1019	Standard Test Methods for Determination of Carbon, Sulfur, Nitrogen, and Oxygen in Steel, Iron, Nickel, and Cobalt Alloys by Various Combustion and Fusion Techniques	
E1085	Standard Test Method for Analysis of Low- Alloy Steels by X-Ray Fluorescence Spectrometry	
Stainless Steel		
E353	Chemical Analysis of Stainless, Heat-Resisting, Maraging, and Other Similar Chromium-Nickel Iron Alloys	Stainless Steel
E572	Test Methods for X-Ray Emission Spectrometric Analysis of Stainless Steel	
E1019	Test Methods Determination of Carbon, Sulfur, Nitrogen, and Oxygen in Steel and in Iron, Nickel, and Cobalt Alloys	
E1086	Method for Optical Emission Vacuum Spectrometric Analysis of Stainless Steel by the Point-to-Plane Excitation Technique	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Gold		
E1335	Standard Test Methods for Determination of Gold in Bullion by Fire Assay Cupellation Analysis	Gold
Aluminum		
E607	Standard Test Methods for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Point-to-Plane Technique, Nitrogen Atmosphere	Aluminum
E1251	Standard Test Method for Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry	
Polyethylene		
D1238	Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer (both Volumetric and Gravimetric)	Polyolefins Resins
D2839	Practice for Use of a Melt Index Strand for Determining Density of Polyethylene (Melt Index Strand Sample Preparation)	
D1505	Test Method for Density of Plastics by the Density- Gradient Technique (Column Density Using Plaques Prepared Using D1928 Procedure C)	
D792	Test Methods for Density and Specific Gravity (Relative Density) by Displacement; Shall Use Plaques Prepared using D1298 Procedure C or D4703, Annex 1, Procedure C	
D4883	Test Method for Density by the Ultrasound Technique; Shall Use Plaques Prepared Using D1298 Procedure C or D4703, Annex 1, Procedure C	
D5630	Test Method for Ash Content in Thermoplastics	
D6290	Test Method for Color Determination of Plastic Pellets	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Multiplastics		
D638	Test Method for Tensile Properties of Plastics	PE, PET, PP, PC, RA, ABS Resins
ISO0527 Part 2	Test Method for Tensile Properties of Plastics	
D790	Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials	
ISO0178	Determination of Flexural Properties of Rigid Plastics	
D256	Test Methods for Determination of the Pendulum Impact Resistance of Notched Specimens of Plastics	
ISO179-1	Test for Charpy Impact Resistance (Notched Impact)	
ISO179-2	Test for Charpy Impact Properties (Instrumental Impact)	
ISO180	Determination of Izod Impact Strength of Rigid Materials	
D648	Test Method for Deflection Temperature of Plastics Under Flexural Load	
ISO75 Part 2	Determination of Temperature of Deflection Under Load	
Flammability		
D3801	Test for Measuring the Comparative Burning Characteristics of Solid Plastics in a Vertical Position	Molding Grade Resins
UL 94V	Tests for Flammability of Plastic Materials for Parts in Devices and Appliances Section 8-20 mm Vertical Burning Test for V0, V1,V2	
IEC 60695-11-10	Fire Hazard Testing Part- 11-10 Test Flames 50W Horizontal and Vertical Flame Test Method B Vertical Burning Test	
Elemental Analyses of Thermoplastics		
ASTM D6247	Elemental Content by XRF, Alternate WDXRF Method, Alternate EDXRF Method	HDPE, LDPE, LLDPE and PP Resins

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Plastic Film Testing		
D1709	Drop Impact Strength	Homopolymer and Copolymer Plastic Film
D6988	Film Thickness	
D2457	Gloss	
D1003	Haze	
D1922	Propagation Tear Resistance	
D1894	Static	
D1004	Tear Resistance	
D882	Tensile	
Knit Fabrics		
D2594	Stretch Properties of Knitted Fabrics Having Low Powder	Single Knit, Double Knit and Stretch Knit Textile
D3774	Width of Textile Fabric	
D3776	Mass Per Unit Ares (Weight) of Fabric	
D3786	Bursting Strength of Textiles Fabrics-Diaphragm Bursting Strength Tester Method	
D8007	Standard Test Method for Wale and Course Count of Weft Knitted Fabrics	
AATCC 135	Dimensional Changes of Fabrics after Home Laundering	
AATCC 179	Skewness Change in Fabric and Garment Twist Resulting from Automatic Home Laundering	
Woven Fabrics		
D737	Air Permeability of Textiles Fabrics	Light, Medium and Heavy Weight Woven Textiles
D1424	Tearing Strength of Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus	
D2261	Tearing System of Fabrics by the Tongue (Single Rip) Procedure	
D3775	Fabric Count of Woven Fabric	
D3776	Mass Per Unit Area (Weight) of Fabric	
D5034	Breaking Strength and Elongation of Textile Fabrics (Grab Test)	
D5035	Breaking Strength and Elongation of Textile Fabrics (Strip Method)	
D5587	Tearing Strength of Textiles Fabrics (Trapezoid Procedure)	

PROGRAM	ANALYTES MEASURED[1]	TYPE OF PT ITEM
Octane Testing		
D2699	Research Octane Number	Gasoline
D2700	Motor Octane Number	

[1]Assigned values and associated uncertainties determined via consensus values.