

PETROLEUM, FUEL, AND CHEMICAL LABORATORY TESTING EXPERTISE



SGS operates one of the largest petroleum and petro-chemical testing laboratory networks in the USA, offering 24/7/365 service.

Hydrocarbons and chemicals tested include crude oils, refined petroleum fuels, aromatics, petro-chemicals, liquid petroleum gases (LPG), natural gas, natural

gas liquids, lubricants, additives, refinery and chemical plant feedstocks, intermediaries, and much more

SGS provides ASTM, ISO, EN, and other testing methods and protocols. Lab expertise includes quality control testing, trace analysis, troubleshooting,

unknowns identification, contamination analysis, and more. Samples are professionally obtained by SGS field personnel or shipped by the customer directly to the SGS lab.

See the reverse side for an overview listing of SGS analytical techniques and capabilities.

SGS



SGS LABORATORY TESTING CAPABILITIES

GAS CHROMATOGRAPHY

- Supercritical Fluid
- Sulfur Speciation
- Mass Spectrometer, GC/MS
- Detailed Hydrocarbon Analysis
- Simulated Distillation
- Chemical waste in Fuel Oil
- PIONA, Oxygenates, Aromatics
- Multi-Dimensional GC
- Component Analysis, Fixed Gases

HPLC

- Mono-, Di-, Tri-, Poly and Total Aromatics

ION CHROMATOGRAPHY

- Anions, Halides (Fluorine, Chlorine)

ELEMENTAL ANALYSIS

- ICP/MS for trace ppb-level
- ICP & AA for ppm level
- Mercury at ppt level
- X-Ray Fluorescence (XRF)
- Microcoulometer – Chlorine
- UV Fluorescence – Sulfur
- Chemiluminescence - Nitrogen

TITRATIONS

- Acid/Base
- H₂S, Mercaptan Sulfur
- Bromine Index/Number
- Basic Nitrogen, Diene Value
- Water/Moisture, Salts, Chlorides

UV/VIS, FTIR

- Naphthalenes
- Peroxides, Carbonyls, Inhibitors
- Characteristic Scans

COLORIMETRY

- ASTM, Saybolt, Pt-Co, APHA, Hunter, Minolta

CORROSIVITY

- Copper, Silver, NACE

DISTILLATIONS

- Atmospheric, Vacuum, Potstill
- True Boiling Point (TBP)
- Simulated by GC

FUEL ENGINE TESTING

- Research Octane Number (RON)
- Motor Octane Number (MON)
- Cetane Number, Derived Cetane Number
- Supercharge Rating

SCANNING ELECTRON MICROSCOPY (SEM)

- Metal wear, deposits

DIFFERENTIAL SCANNING CALORIMETER

- Melting, Stability

THERMAL GRAVIMETRIC ANALYSIS

- Phase study

OTHER PHYSICAL PROPERTIES

- Refractive Index
- Vapor Pressure
- Density, Viscosity, Lubricity
- Auto-Ignition, Flash Point, Fire Point
- Cloud, Pour, CFPP
- Calorific Value
- Thermal and Oxygen Stability
- Cleanliness – particle size distribution
- Needle Penetration
- Aniline Point
- Volatility

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WHEN YOU NEED TO BE SURE

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