

SULFUR TESTING EQUIPMENT FOR PETROLEUM PRODUCTS



Sulfur Testing Equipment for Petroleum Products

Sulfur content is one of the most tightly regulated elemental parameters in petroleum fuels worldwide. Driven by environmental legislation to reduce sulfur dioxide emissions and protect catalytic after-treatment systems, sulfur analysis is a mandatory quality control and compliance test for every category of petroleum fuel — from gasoline and diesel to jet fuel, marine bunkers, and lubricant base oils.

Torontech's sulfur tester portfolio provides multiple measurement technologies to address the full range of sulfur levels, product matrices, and regulatory requirements encountered in the petroleum industry. From ultra-low sulfur analysis by ultraviolet fluorescence and X-ray fluorescence (XRF) to total sulfur determination by the lamp method and mercaptan sulfur by potentiometric titration, Torontech's sulfur analysis instruments cover every standard test method.

APPLICATIONS

Application

Sulfur analysis is applied across every category of petroleum product and a wide range of industry sectors:

- Ultra-low sulfur diesel (ULSD): Sulfur tester verification that diesel fuel meets 10 ppm or 15 ppm regulatory sulfur limits per ASTM D5453 (UV fluorescence) and ASTM D4294 (XRF).
- Gasoline and petrol: Sulfur analysis for Euro 6, CARB, and EPA Tier 3 specification compliance at sub-10 ppm sulfur levels.
- Marine bunker fuels: IMO 2020 0.5% global sulfur cap compliance verification and MARPOL Annex VI enforcement using XRF sulfur tester technology.
- Jet fuel and aviation gasoline: Sulfur content verification per ASTM D1266 (lamp method) and ASTM D5453 for aviation safety specification compliance.

- Transformer and electrical insulating oils: Corrosive sulfur testing (ASTM D1275, IEC 62535) to prevent copper conductor corrosion in power transformers.
- Mercaptan sulfur in LPG and natural gas liquids: Potentiometric titration method for aggressive mercaptan sulfur species that cause odor and corrosion problems.
- Lubricant base oils: Sulfur content verification for base oil group classification and additive compatibility assessment.

FEATURES

Why Choose Torontech's Series for Your Sulfur Testing Equipment for Petroleum Products?

Torontech's sulfur tester portfolio is the most comprehensive available for petroleum industry applications:

- Multi-Technology Coverage: UV fluorescence for ultra-low sulfur; XRF for rapid screening across a wide concentration range; lamp method for total sulfur; potentiometric titration for mercaptan sulfur — Torontech's range covers every sulfur analysis method used in petroleum testing.
- Regulatory Compliance Ready: All Torontech sulfur tester instruments are designed to meet the requirements of ASTM D5453 (UVF), ASTM D4294 (XRF), ASTM D1266 (lamp), ASTM D3227 (mercaptan), and related international sulfur standards.
- Ultra-Low Detection Capability: Torontech's UV fluorescence sulfur tester achieves detection limits in the low ppm range, essential for ULSD and Euro 6 gasoline specification compliance.
- Corrosive Sulfur Specialization: The dedicated transformer oil corrosive sulfur tester addresses the specialized IEC and ASTM requirements for electrical insulating oil sulfur analysis, a growing area of concern in power industry reliability management.
- Rapid XRF Analysis: The X-ray fluorescence sulfur content apparatus delivers non-destructive, rapid sulfur analysis with minimal sample preparation, ideal for high-throughput refinery and terminal QC operations.



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