TORONTECH

PETROL & GASOLINE TESTING EQUIPMENT

Petrol and Gasoline Testing Equipment

Petrol and gasoline are the most quality-sensitive of all petroleum fuels, with specifications that govern combustion performance, volatility, composition, stability, environmental compliance, and consumer safety. Octane rating defines engine knock resistance and power output. Reid Vapor Pressure (RVP) controls evaporative emissions and cold-start performance. Sulfur content must meet increasingly stringent limits. And the rising use of oxygenate blending components — ethanol, MTBE, and others — requires precise compositional analysis.

Torontech's petrol and gasoline testing equipment portfolio provides complete analytical capability for modern gasoline quality control. With 21 dedicated instruments addressing every critical gasoline specification parameter — from octane number and RVP through distillation, sulfur, oxygenate composition, oxidation stability, lead content, and elemental analysis — Torontech enables petroleum laboratories to certify gasoline quality against ASTM, EN, ISO, and national regulatory standards.

APPLICATIONS

Application

Torontech's petrol and gasoline testing instruments serve quality control requirements across the full gasoline production and distribution chain:

- Octane rating verification: Both the portable TT-131 and the laboratory-grade TT-300R provide octane number determination (Research Octane Number, RON; Motor Octane Number, MON) per ASTM D2699/D2700, the defining performance parameter for gasoline grades from regular to premium.
- Ultra-low sulfur gasoline compliance: The UV fluorescence sulfur tester (TT-5453, ASTM D5453) detects sulfur at sub-10 ppm levels required for Euro 6 and EPA Tier 3 gasoline specifications.

- Reid Vapor Pressure (RVP) control: RVP is the critical seasonal volatility parameter for gasoline, governing evaporative emissions and vapor lock risk. Torontech's automatic RVP bath (TT-323Z, ASTM D323) provides precise, automated vapor pressure measurement.
- Distillation profile: ASTM D86 distillation (TT-86A double-tube or TT-86Z automatic) defines the front-end, mid-range, and tail-end volatility of gasoline, governing driveability, fuel economy, and deposit formation.
- Oxygenate composition analysis: GC for oxygenates (TT-4815, ASTM D4815) quantifies ethanol, MTBE, ETBE, and other oxygenate blending components — essential for renewable fuel content verification and regulatory compliance.
- Oxidation stability: Gasoline oxidation stability tester (TT-525Z, ASTM D525, induction period method) measures gasoline stability against oxidative gum formation during storage — critical for fuel quality assurance across the distribution chain.
- Lead content monitoring: AAS for lead in gasoline (TT-3237, ASTM D3237) supports leaded gasoline monitoring programs and compliance verification for markets still managing the lead elimination transition.
- Hydrocarbon type analysis: Fluorescent indicator absorption (TT-1319, ASTM D1319) quantifies saturates, olefins, and aromatics in gasoline — key composition parameters for refinery blending and environmental specification compliance.

FEATURES

Why Choose Torontech's Series for Your Petrol & Gasoline Testing?

Torontech's petrol and gasoline testing portfolio is designed for the specific analytical demands of modern gasoline quality programs:

- Dual-Level Octane Testing: Torontech offers both the portable TT-131 for rapid field and terminal screening and the laboratory TT-300R engine-based octane tester for definitive ASTM D2699/D2700-compliant RON and MON determination — covering the full range of octane testing needs from upstream screening to final product certification.
- Specialized GC Systems: Torontech's application-specific gas chromatography systems for oxygenate determination (TT-4815) and naphtha detailed analysis (TT-5134) are pre-configured for their target gasoline analysis methods —

providing laboratory-ready compliance with ASTM D4815 and D5134 without extensive method development.

- Comprehensive Sulfur Portfolio: UV fluorescence sulfur tester (TT-5453) for ultra-low sulfur detection, mercaptan sulfur by potentiometric titration (TT-3227) for aggressive sulfur species, and hydrogen sulfide detection (TT-7621) — together providing complete sulfur species analysis capability for gasoline quality control.
- Volatility Testing Suite: Reid Vapor Pressure (TT-323Z), atmospheric distillation (TT-86A/Z), and water content (TT-6304/TT-203) instruments together provide the complete volatility characterization package required for seasonal gasoline specification compliance.
- Regulatory Compliance Across Markets: Torontech's 21-instrument gasoline testing range supports compliance with ASTM, EN 228, EN 13132, ISO, and national regulatory standards simultaneously — essential for petroleum companies operating across multiple geographic markets with different gasoline specifications.

TECHNICAL SPECIFICATIONS

How to Choose: Petrol & Gasoline Instrument Comparison

Use the table below to select the Torontech instruments relevant to your petrol or gasoline quality control program:

Instrument	Model	Standard
Automatic Cleveland Open Cup Flash Point Apparatus	TT-92E	ASTM D92
Double Tubes Distillation Apparatus	TT-86A	ASTM D86
Automatic Distillation Apparatus for Petroleum Products	TT-86Z	ASTM D86
Dean Stark Distillation Water Content	TT-95	ASTM D95
Coulometric Karl-Fischer Titration Tester	TT-6304	ASTM D6304
Volumetric Karl Fischer Moisture Titrator	TT-203	ASTM D1533
Gasoline Oxidation Stability Tester	TT-525Z	ASTM D525

Instrument	Model	Standard
Mercaptan Sulfur Content (Potentiometric Titration)	TT-3227	ASTM D3227
Density Test by API Hydrometer	TT-1298	ASTM D1298
Fluorescent Indicator Absorption Apparatus	TT-1319	ASTM D1319
Automatic Reid Vapor Pressure Bath	TT-323Z	ASTM D323
Apparatus for Hydrogen Sulfide in Fuel Oils	TT-7621	ASTM D7621
Colorimeter for Petroleum Products	TT-1500	ASTM D1500
Ultraviolet Fluorescence Sulfur Tester	TT-5453	ASTM D5453
Portable Octane and Cetane Tester	TT-131	ASTM D2699
Octane Number of Spark-Ignition Engine Fuel	TT-300R	ASTM D2699/D2700
AAS for Testing Lead in Gasoline	TT-3237	ASTM D3237
GC for Detailed Analysis of Petroleum Naphthas	TT-5134	ASTM D5134
GC Determining Oxygenates in Gasoline	TT-4815	ASTM D4815
Automatic Digital Refractometer	TT-1218	ASTM D1218
Carbon, Hydrogen and Nitrogen Elements Analyzer	TT-5373	ASTM D5373

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