

EVALUATE BOILING DISTRIBUTION ACCURATELY AND RELIABLY

The Measure of Confidence



Agilent Simulated Distillation Gas Analyzers

Simulated distillation, the primary separation process for crude oil refining, lets you quickly and accurately determine the boiling point distribution of hydrocarbon fractions prior to refining. Understanding boiling point distribution is critical to optimizing production, quality, and commercialization of petroleum streams – and is a key part of ASTM simulated distillation methods.

Get application workflows up and running reliably immediately after installation

Agilent Simulated Distillation Analyzers are based on the Agilent 7890B GC System. Each is factory pre-tested and pre-configured to save precious start-up time for your simulated distillation analysis per ASTM methods.

In addition, **Agilent Simulated Distillation software**, which is compatible with OpenLAB CDS, gives you a user-friendly platform for:

- Initiating real-time analysis and stand-alone operation using integrated program modules
- Instantly selecting and viewing chromatograms from the Results Directory Tree
- Creating graphic reports for engineering, calibration, and signature
- Generating text reports for yield %, cut point, tabulated response, calibration, and calculated values for 2887-D86 correlation and cut point



Agilent Simulated Distillation Analyzers reflect innovative technology, intuitive software, and a stringent quality control process. Systems include:

Factory

- System setup and leak testing
- Instrument checkout
- Installation of appropriate columns
- Factory-run checkout method using application checkout mix

Delivery

- Instrument manual for running the method
- CD-ROM with method parameters and checkout data files for easy out-of-the-box operation
- Application-related consumables included – no separate ordering required
- Easy consumables re-ordering information

Installation

- Duplicate factory checkout with checkout sample – onsite by factory-trained support engineer
- Optional application startup assistance



Agilent Technologies

Simulated Distillation Analyzers

For generating data about operations, processes, and product quality

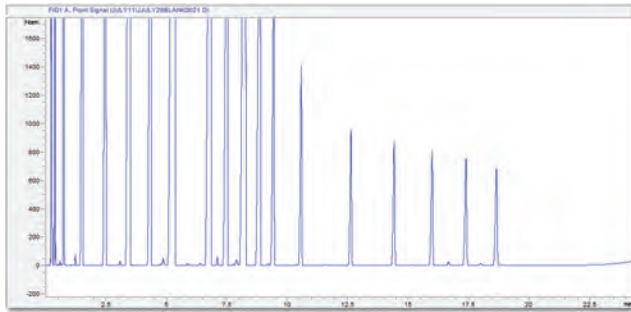
Capillary Column Analyzers

Configured to meet ASTM analysis/reporting requirements

Built on the flagship Agilent 7890 GC system, these Analyzers address a range of industry standard methods with features such as:

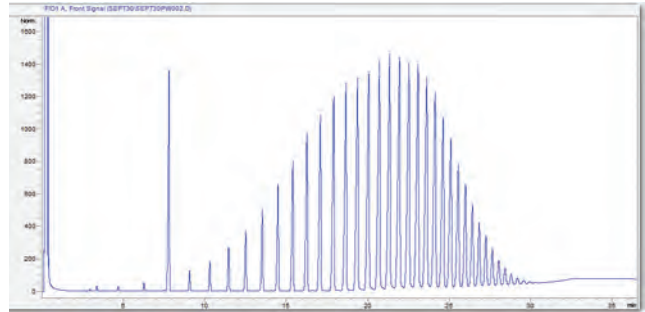
- Quick calibration setup with robust browser features and multiple reporting options
- Automatic sequencing through integration with Agilent GC OpenLAB
- High-performance Multimode Inlet (MMI) optimized for simulated distillation applications
- Powerful, fast, and easy-to-use simulated distillation software

ASTM D2887: Boiling Range from 55 to 538 °C



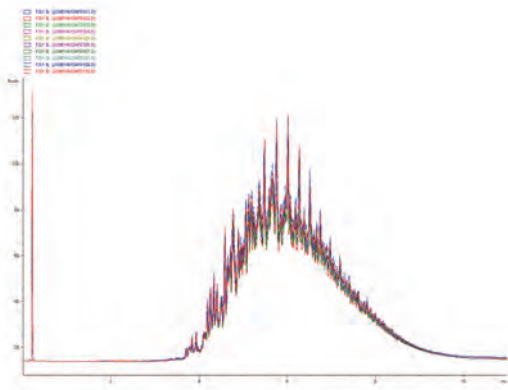
Calibration Sample, C5-C40.

ASTM D6352: Boiling Range from 174 to 700 °C



Polywax 655 calibration to C94.

ASTM D7213: Cracked Gas Oil Boiling Range from 100 to 615 °C



Chromatographic performance for this analysis of heavy-vacuum-gas oil was enhanced using the Multimode Inlet. Overlay of 10 runs shows excellent repeatability.

Low Thermal Mass Analyzers

The reliable choice when time is of the essence

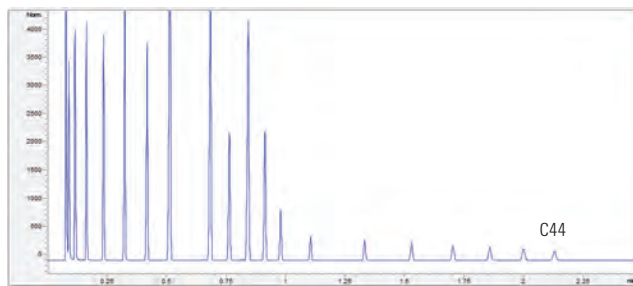
The ability to reduce cycle times and increase throughput can help you make fast decisions that improve process efficiency and profitability. It also shortens hold times, allowing you to release raw materials to production – or finished products to market – more quickly.

Agilent Low Thermal Mass (LTM) Analyzers feature an LTM column module, which is controlled from the 7890B. The module combines a fused silica capillary column with direct heating and temperature-sensing components to ensure efficient column heating and cooling – and significantly shorter cycle times. Other advantages include:

- High throughput: Analyze samples containing C5 through C44 in less than 2.5 minutes
- Accurate, reproducible results for boiling point determinations with RSDs $\leq 1\%$
- Ease of use: Intuitive software simplifies analysis and reporting

Fast cycling times

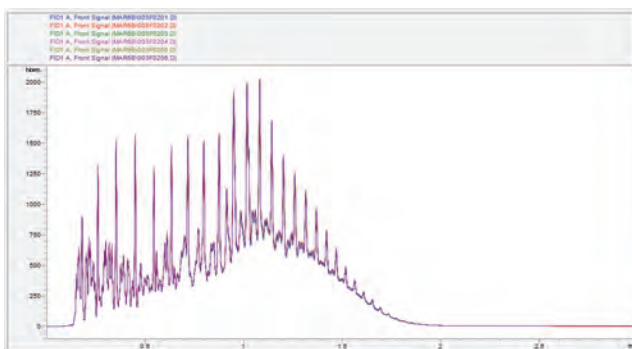
LTM Ultra Fast SimDis Cycle Time C5 to C44 calibration chromatogram



The direct heating and low thermal mass of the LTM module enabled a boiling point calibration to C44 in less than 3 minutes.

Excellent reproducibility

RGO Overlay of 5 Runs: 160 C°/min, MMI



This overlay shows excellent repeatability and retention time precision.

We also offer fully customized Analyzers for your unique requirements

Agilent, together with our Channel Partners, can help you meet your most challenging demands with specialized technologies that significantly reduce your time from system arrival to final validation. With pre-configured hardware and method-specific separation tools, your analysts can spend *more time* on calibration and validation per your laboratory's SOPs.

To review our full line of analyzers, visit [agilent.com/chem/appkits](https://www.agilent.com/chem/appkits)

Agilent has the technology and experience to support your lab with fully customized solutions

Over the past four decades, Agilent has taken an active role in developing methods and applications – many of which have evolved into global standards for energy/fuels analysis.

Our 7890 GC, for example, is the world's most widely used GC system. It features accurate temperature controls and precise injection systems – plus enhanced Electronic Pneumatic Control (EPC) for the best retention times.

In addition, Agilent experts continue to be actively involved in ASTM – the world's most trusted source for standards development. We have applied this deep regulatory understanding toward developing methods for our Simulated Distillation Analyzers.

Beyond the box:

A full portfolio of customized products, advice, and support

High-quality columns and supplies from the world GC leader

Agilent-engineered GC columns and supplies deliver what your analysts demand – including:

- Long-term reliability and robustness
- Trouble-free instrument operation
- Faster analysis *without* loss of resolution

Local, on-site assistance

No matter where you are on the energy/fuels supply chain, Agilent can help you increase production efficiency... reduce scrap and rework... and enhance product quality.

Best-in-class service and support

Whether you need support for a single instrument or a multi-vendor operation, Agilent service professionals can help solve problems quickly and increase your uptime, so you can focus on what *you* do best.

Custom GC and GC/MS configurations

Let Agilent customize a standard GC or a GC/MS analyzer with specialized columns, valves, tubing inlets, and other add-ons – including an extensive line of consumables and column modules.

Ordering information:

Method	Description	Carbon Number	Sample Range	Part Number
ASTM D2887	Simulated Distillation Analyzer: Boiling Range from 55 to 538 °C	C ₄₄	Jet fuel, diesel	G3440B#653
ASTM D7213	Simulated Distillation Analyzer: Boiling Range from 100 to 615 °C	C ₆₀	Lube oil base stock	G3445B#654
ASTM D6352	Simulated Distillation Analyzer: Boiling Range from 174 to 700 °C	C ₁₀₀	Lube oil base stock	G3445B#655
ASTM D7169	Simulated Distillation Analyzer: Boiling Range from 174 to 720 °C	C ₁₀₀	Crude oils and residues	G3445B#655
ASTM D6417	Simulated Distillation Analyzer: Boiling Range from 174 to 615 °C	C ₆₀	Motor oil volatility	G3445B#654
ASTM D7398	Simulated Distillation Analyzer: Boiling Range from 174 to 615 °C	C ₆₀	Biodiesel	G3445B#654
ASTM D7798	Simulated Distillation Analyzer: Boiling Range from 55 to 538 °C	C ₄₄	Jet fuel, diesel	G3445B#658
*ASTM D5307	Simulated Distillation IBP-538 °C	C ₄₄	Crude oil	Superseded
ASTM D3710	Simulated Distillation IBP-260°C	C ₁₅	Gasoline naphtha	Channel Partner

*Replaced by ASTM D7169

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or Agilent Authorized Distributor at
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Or call **800-227-9770** (in the U.S. or Canada)

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for a description of available Analyzers and Application Kits

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Printed in U.S.A., November 20, 2014
5991-5044EN



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