thermo scientific

Complete sample preparation workflow solution

Sample preparation, gas chromatography-mass spectrometry, and data analysis

When performing analyses, the combination of Thermo Scientific™ Dionex™ sample preparation systems with Thermo Scientific™ GC-MS/MS products enable unstoppable productivity and higher efficiency, helping chemists save time, labor and money by simplifying routine workflows and providing rapid pathways from sample to results.

Sample preparation: extract

Sample preparation is the first and most critical step in achieving quality results by removing unwanted matrix components, and enabling clean downstream separations and detections.

Liquids

Solids or Semisolids

Thermo Scientific™ Dionex™ AutoTrace™ 280 Solid-Phase Extraction (SPE) Instrument

Thermo Scientific™ Dionex™ ASE™ 150 and 350 Accelerated Solvent Extractor Systems

Separation and detection: analyze

Separation and detection of the diverse molecular species require using gas chromatography (GC) often coupled with mass spectrometry (MS). Analysis using GC-MS detections provides retention time information and unique mass spectra confirmation. When needed, the lowest detection limits, highest matrix tolerance and the ability to monitor hundreds of compounds in a single run can be achieved thanks to the enhanced selectivity of triple quadrupole MS/MS.

Thermo Scientific™ TSQ™ 9000 Triple Quadrupole GC-MS/MS

Thermo Scientific™ TraceGOLD™ GC Columns

Thermo Scientific™ TRACE™ 1300 Series GC

Thermo Scientific™ Rocket Synergy 2 Evaporator

Data analysis: report

Results must be verified by careful analysis. Efficient data valuation and interpretation leads to an increase in overall productivity.

Thermo Scientific™ Dionex™ Chromeleon™ Chromatography Data System (CDS) Software

Thermo Scientific™ TraceFinder™ Software

ThermoFisher SCIENTIFIC

thermo scientific

Sample preparation

The automated **Dionex ASE 150 and 350 Accelerated Solvent Extractor** systems enables extraction of solid and semisolid samples using organic solvents and water at elevated temperatures and pressures.

- Unattended, automated extraction of up to 24 samples (up to 100 mL); requiring less time and solvent, and reducing costs
- Performs automated extractions within 12 to 20 minutes

The automated **Dionex AutoTrace 280 SPE** instrument extracts large-volume samples (20 mL – 4 L) for the isolation of trace organics in water or aqueous matrices more quickly with better analyte recovery than manual liquid-liquid extraction (LLE) methods.

- Reduces solvent usage and time with the SPE technology
- Increase productivity or sample throughput with unattended operation

The **Rocket Synergy 2 Evaporator** is a revolutionary solvent evaporator that concentrates or dries up to 18 ASE™ vials or 6 large-volume flasks unattended.

- Effective bumping and cross-contamination protection with precise sample temperature regulation
- Proven to yield fast, unattended operation that significantly improves laboratory productivity

For more information on these Sample Preparation products, visit **thermofisher.com/chromatography**

Separation and detection

The high-performance **TRACE 1300 Series GC system** features user-exchangeable miniaturized, instant connect injectors and detectors modules for an easier off-line maintenance and for enhanced flexibility in configuration. Spare modules enable the user to quickly tailor instrument capability to specific applications and daily workload.

- Instant connect, user-installable injectors and detectors
- Off-line maintenance for ultimate productivity in routine analysis

For more information on the TRACE 1300 Series GC system, visit **thermofisher.com/GC**

The **Thermo Scientific™ ISQ™ 7000** single quadrupole GC-MS system is an affordable and robust solution for dependable, routine GC-MS analyses that offers operational simplicity and unstoppable productivity.

- Vent free ion source and column exchange maximizing lab productivity and for GC column replacement, to maximize instrument uptime
- Inert sample path for highest chromatographic integrity adding to instrument robustness and data confidence

For more information on the ISQ 7000 GC-MS, visit **thermofisher.com/ISQ7000**

The **TSQ 9000 Triple Quadrupole GC-MS/MS system** is a reliable, easy-to-use system that enables faster, more precise, error-free analyses, saving time and reducing laboratory costs.

- Maximum source robustness for high throughput analysis with Thermo Scientific™ NeverVent™ technology
- MS/MS simplicity for effortless method development and operation
- Enhanced sensitivity with the Advanced Electron Ionization (AEI) source for challenging applications

For more information on the TSQ 9000 GC-MS/MS system, visit **thermofisher.com/TSQ9000**

TraceGOLD GC Columns offer you a leap forward in column performance, delivering ultra low bleed, superior inertness, and a high level of reproducibility, guaranteed.

- High levels of reproducibility – both run-to-run and column-to-column. You can expect consistent high-level performance from every column
- Superior inertness – ensuring excellent peak shape and sensitivity, especially for highly active or difficult compounds

Data analysis

Chromeleon CDS software is the first CDS software that combines separation (GC/IC/LC) and MS in an enterprise (client/server) environment.

- One set of methods, one set of reports and one central location for chromatography and MS data
- Comprehensive suite of Chromeleon CDS software productivity tools from dynamic data linking, instant processing, to SmartPeaks™ detection - now available for MS

For more information on Chromeleon CDS software, visit **thermofisher.com/chromeleon**

TraceFinder Software is an easy-to-use software for routine GC, GC-MS, LC, and LC-MS quantitation, and targeted screening, that increases productivity with powerful method development, simplified acquisition and comprehensive data review.

- Develops complex, processing method in minutes
- Runs the chromatography, processes the data, and produces final results

Find out more at **thermofisher.com/chromatography**

FL7070-EN 0720S

ThermoFisher SCIENTIFIC