

Targeted MS quantitation

Controlled and accessed
from anywhere

Thermo Scientific™ Chromeleon™ 7.4 software

Chromeleon software: Redefined for mass spectrometry

Thermo Scientific™ Chromeleon™ 7.4 software enables you to consolidate your mass spectrometry (MS) laboratory, connecting instruments, users, and data in a centralized, scalable, server-based data system.

It provides data access from anywhere and streamlines operations by centrally managing all methods, templates, and reports. With full support for GxP (Good Laboratory/Manufacturing Practice) compliance, the ability to query and interrogate data within the system ensures that data integrity requirements are met, delivering full traceability, and verification of data throughout its lifecycle.

Native control of Thermo Scientific™ single and triple quadrupole and high-resolution accurate mass (HRAM) MS instruments enables robust, remote instrument operation. Data processing functionality is tailored to support targeted quantitation and screening MS workflows in biopharma, environmental, and food safety.

The full power of [Chromeleon software](#) is now seamlessly merged with industry-leading Thermo Scientific MS instrumentation to deliver a best-in-class solution for targeted multiple stage handling (MSn) quantitation workflows.



Connect your MS instruments



Key benefits

- One software, centrally managed, reducing training and administration effort
- One set of methods, one set of reports, and one central location for all your MS and chromatography data
- A comprehensive suite of MS analysis tools for targeted quantitation and screening
- Support for intact mass deconvolution both isotopically resolved and unresolved
- Targeted MSn library searching for both XIC and fragments, with fragment scan matching to support DDA instrument methods
- Customizable spreadsheet-based reporting with querying for multi-consensus reports
- Data security with network failure protection and data integrity with GxP and 21 CFR Part 11 compliance-readiness



Improve efficiency with a single software solution

“When we perform lead selection studies, the first thing is to determine if our candidate molecules are aggregating, along with their identities. We can do that in a single experiment with native SEC(UV)-MS and Chromeleon software, and it’s a matter of seconds screening through the results.”

Dr. Dan Bach Kristensen,
Principal Scientist, Symphogen

One software for LC, GC, IC, CE and
quantitative MS/MS applications

Consistent user experience for all analyses
regardless of deployment model

One method covering front-end and MS for
acquisition, processing, and reporting

“Setting up sequences on the LC-MS is really simple and guided; analysts can come in and select the relevant workflow, which contains all the relevant methods that are locked down and validated, only needing to add the samples to the LC as the system automatically brackets samples.”

Kerry Malone, Team Leader, Broughton Laboratories

Take control with access and administration from anywhere

“With Chromeleon software we can manage all our instruments and work with data remotely via a centralized server, which means we don’t need to be in the laboratory to access our data ... and query any data from the entire installation with a simple mouse click.”

Kayleigh Arthur, Owlstone Medical

Automated central data storage using a
relational database to enable data querying

Remote working with secure access to data
and instruments from anywhere

Straightforward administration with a
built-in automated updater tool

Deliver resilience and scalability with networked software

Continuous uptime with best-in-class automated network failure protection

Scale without reinstallation from small on-premise to large, multi-site cloud deployment

Data security with multiple security layers preventing unauthorized access

“Most of the work at HFR Bowburn is small scale production to either ISO 9001 or GMP quality standards. Chromeleon software has really helped us to enhance our compliance capabilities and has made the analytical QA review process a lot more efficient.”

Stuart Penny, Chief Technical Officer,
and a founder of High Force Research

“In total we have analyzed over 9,000 samples so far and in 90% of cases where the target mass was in the reaction, we have found it automatically.”

Rene Spang, Head of Laboratory Mass Spectrometry Service, Bayer Pharma AG, Wuppertal, Germany

Ensure adherence to the most stringent regulations

Support regulatory compliance to GxP, ISO and 21 CFR Part 11 guidelines

Data integrity assured with granular user controls, extensive audit trails, and result versioning

Data review by exception using electronic reports and signatures

“Chromeleon software allows us to audit trail everything that we need to, making it easier when we are audited. The user management system and centralized resourcing means that data access and backup is easily managed, ensuring data integrity.”

Adam Neaves, Quality and Compliance Specialist

Redefined to support your MS workflows

Bioanalysis

Make compliance an advantage

[Bioanalytical studies](#) involving the quantitative measurement of drugs and metabolites in biological fluids can be performed using a single software solution, built to meet the most stringent regulatory guidelines.

Chromeleon 7.4 software supports simultaneous MS data acquisition with automated system suitability testing and intelligent in-run reactions to out-of-spec readings. It also provides spectral library integration for compound identification and MS/MS capabilities for structural elucidation. Perform advanced data processing with custom reporting and data exchange with Thermo Scientific™ Watson™ LIMS software via a dedicated interface.

New modalities

Protein, peptide, and oligonucleotide biotherapeutics

Gain unparalleled confidence with complex and emerging therapeutic modalities, like heavily modified synthetic [oligonucleotides](#) (including ASO, siRNA, gRNA, and mRNA), complex antibodies (bi/tri specific and conjugated), lipid nanoparticles, and viral vectors.

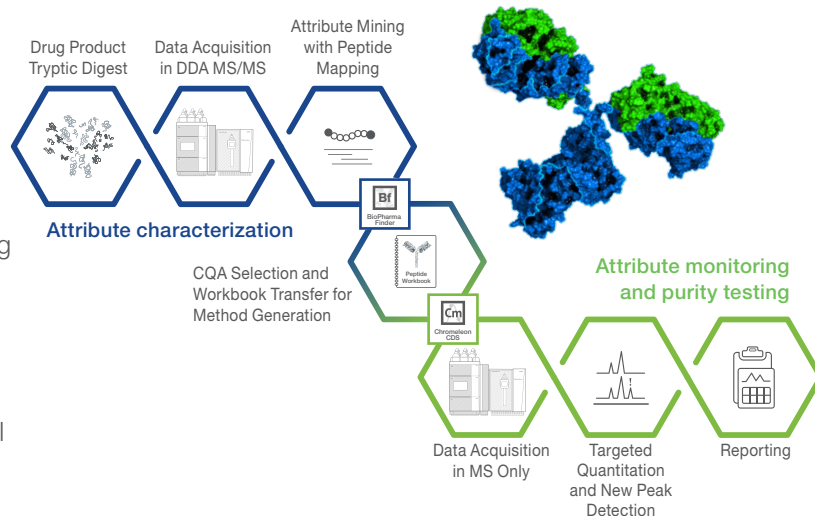
Equip your lab with the right tools for compound identification over multiple charge states and polarities, supporting both positive and negative ion modes simultaneously with additional support for advanced data-dependent MS scans enabling multiple stage handling (MS_n) for comprehensive structural analysis and integrity validation.

mAbs and intact proteins

Confidently characterize and monitor without compromise

Streamline the analysis and quantitation of intact proteins by deconvoluting multiple charge states into a composite, unionized mass spectrum.

Chromeleon software ensures high-quality results using optimized algorithms for both isotopically resolved and unresolved data. It provides high-throughput, accurate results even for low-abundance proteins. Targeted sequence confirmation with incorporated NIST library screening also enables enriched identification of critical product quality attributes.



The flexibility of the [Thermo Scientific™ BioPharma Finder™ software](#) combines with compliance-ready Chromeleon software to deliver a powerful [Thermo Scientific™ HR Multi-Attribute Method \(HR-MAM\)](#) workflow for confident characterization and monitoring.

Dioxins, PCBs, and POPs

Advanced internal standard techniques for pollutant quantitation

[Dioxin](#) and polychlorinated biphenyls ([PCB](#)) analysis requires advanced internal standard techniques for accurate pollutant quantitation due to the complex matrices in environmental, food, and other samples. Persistent organic pollutants (POPs) are routinely monitored in various samples using isotope dilution mass spectrometry (IDMS) with surrogate and syringe standards.

Built-in capabilities for extensive sample reporting with ^{13}C -labelled standards recovery, ion ratio, sum parameters, and LOQ flagging, automating the necessary calculations within the software. Ready-to-use templates provide easy implementation of compliant methodology.

PFAS

Compliant acquisition, advanced discovery, and targeted reporting

Combine Chromeleon software with [Thermo Scientific™ Compound Discoverer™ software](#) to deliver a robust solution for per- and polyfluoroalkyl substances ([PFAS](#)) analysis.

1. The process starts with compliant MS data acquisition with Chromeleon software.
2. Data is then transferred to Compound Discoverer software for advanced discovery and identification of PFAS compounds using powerful algorithms and spectral libraries.
3. Finally, Chromeleon software handles targeted processing, reporting and data management to meet regulatory standards.

This integrated workflow ensures reliable and efficient PFAS analysis from acquisition to reporting.

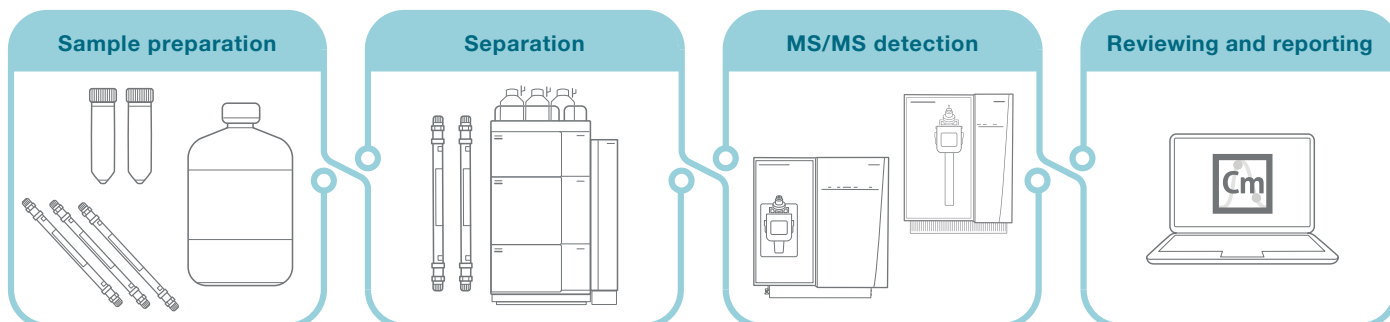
Pesticides

End-to-end workflows

Chromeleon software delivers a fast and simple way to process and review [pesticide](#) analysis data. With tailored view settings enabling a guided journey through processing to final report, training is reduced and errors minimized.

Designed to deliver more reliable results in a shorter time frame, the software highlights results falling outside laboratory-defined specifications, enabling focused analysis in accordance with SANTE guidelines.

Automated cross-confirmation capabilities further enhance efficiency by reducing the need for re-injections and minimizing the risk of false positive/negative results.



Find out more at thermofisher.com/chromeleonms

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