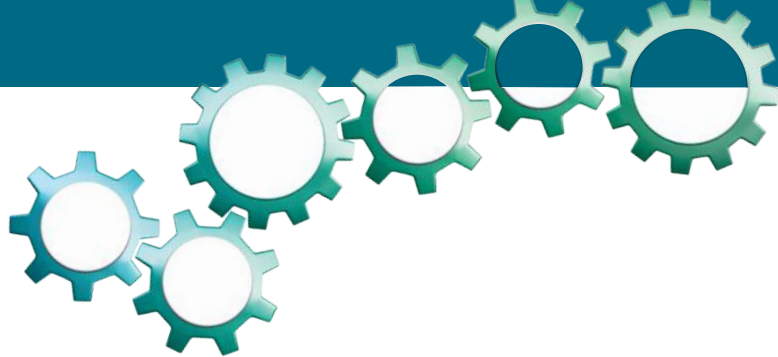# Chromeleon CDS

Instruments, intelligence, insight

ThermoFisher
SCIENTIFIC

# One CDS for your chromatography and mass spectrometry instruments

Our chromatography and mass spectrometry instruments are intuitive and innovative—ensuring simple operation while achieving better separations and higher sensitivity than ever before.

Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS) is built on the same principles—simplifying your workflow and giving you superior insights into your data, delivering ease of use, comprehensive instrument control, automated data analysis and flexible reporting.

A CDS is vital for efficient and reliable handling of today's complex scientific data and managing the entire analytical process. From constantly changing research and discovery methods, to routine testing and anything in between, Chromeleon CDS streamlines your entire workflow, delivering better results, faster, and with more confidence.

Chromeleon CDS helps you to…
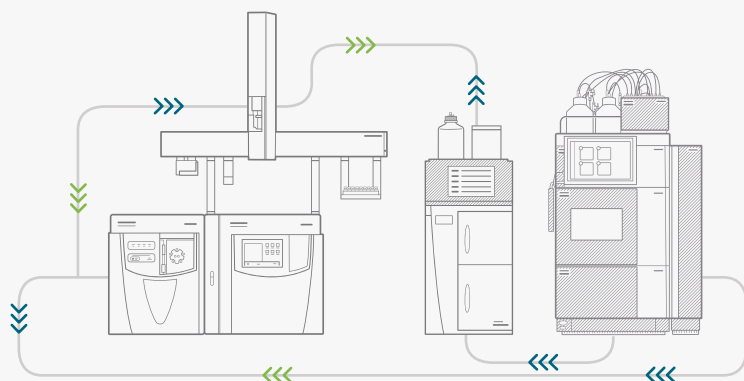
…increase productivity

- Reduce errors in sequence setup, and simplify training using eWorkflow™ procedures

- Achieve "right first-time" analyses using Smart Startup and Intelligent Run Control

- Fast data processing, reviewing and reporting with dynamic updating and smart tools built in

> "With the fully automated workflow provided by Chromeleon CDS, we are now able to run analyses over lunch, evenings, and weekends, so we can analyze more samples with the same number of technicians."
>
> – Rene Spang, Head of Laboratory Mass Spectrometry Service, Bayer Pharmaceuticals

…control all your instrumentation

- Native control for Thermo Scientific IC, GC, LC and MS instruments
- Comprehensive control for more than 540 instruments
- Customizable ePanels provide a consistent look and feel for all instruments

…get the most out of your data

- Deliver accurate and reliable results with built-in reporting tools
- Create any report you need using the spreadsheet-based report designer
- Find, collate and report results across multiple sequences using powerful data mining tools
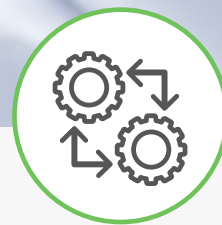
…connect your laboratory

- Network existing Chromeleon Stations to create a compliant, laboratory-wide solution with no additional licenses
- Utilize network resources and centralize administration of your Chromeleon Stations
- Easily interface with other laboratory software

Meet Chromeleon CDS

Chromeleon Console: Instruments, Data and eWorkflows

Easy data organization
Folder structure can be arranged to fit with any workflow.

Instant data access
Chromatogram MiniPlots™ and Custom Report Columns give immediate feedback on injection quality and results.

Convenient categories
For easy navigation between instruments, data, and eWorkflow procedures.

Associated items
All files required to run, process and report the data are included. Also attach external files, e.g., a standard operating procedure (SOP) for direct access.

eWorkflow procedures – fastest way from samples to reliable results

Customizable ePanels for instrument control

> "Chromeleon CDS is a very efficient platform for acquiring, processing, and reviewing data. Despite having a large number of samples, we can quickly review results comparing the theoretical masses with the measured masses of our lead candidates. It's very easy to visually process a lot of samples in a very short time."
>
> – Dr. Dan Bach Kristensen, Principal Scientist, Symphogen

Chromatography Studio: Data Processing and Reporting

Easy sample navigation
Quickly switch between injections and pin to overlay.

Interactive ribbon
Easily find all relevant tools and functions for the current activity.
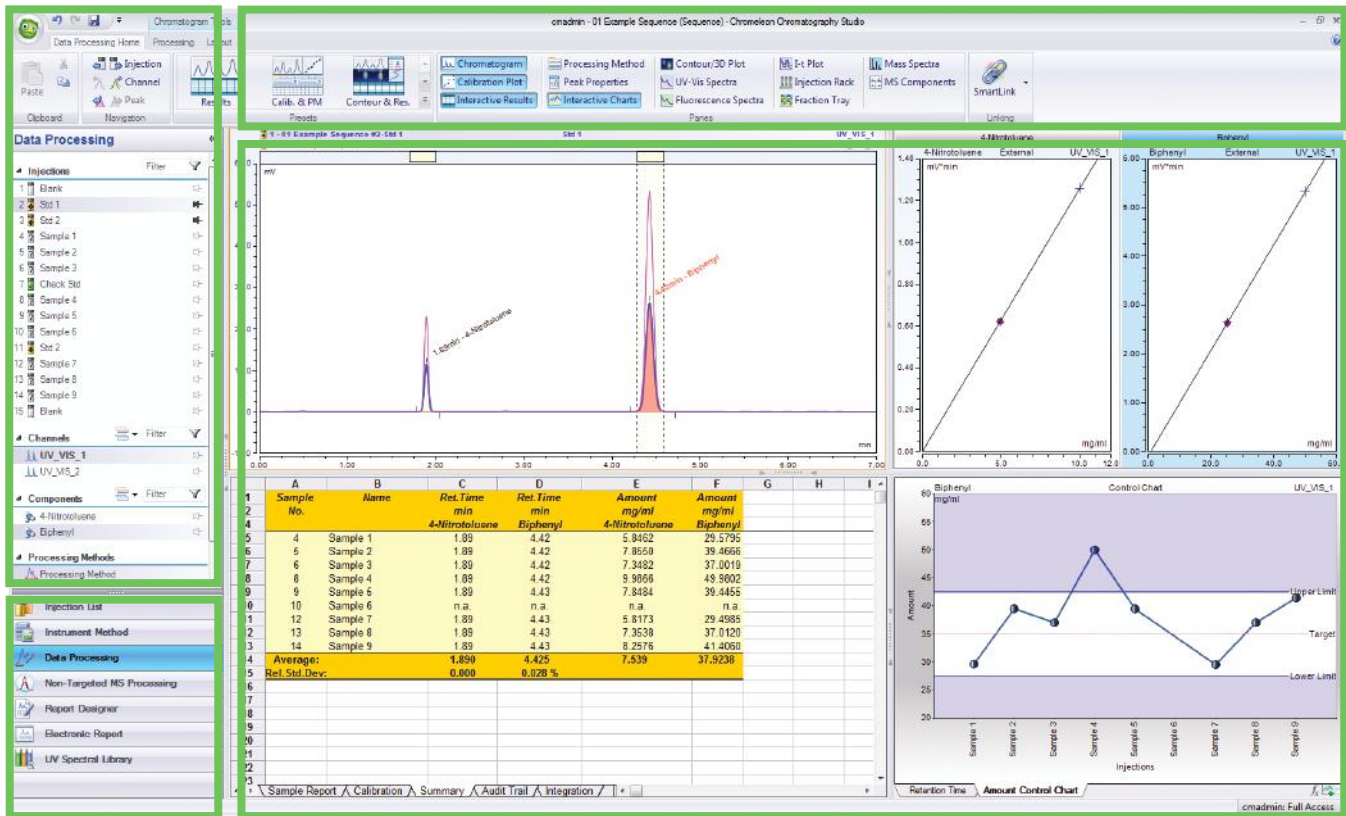
Convenient categories
Access everything needed to process, review and report the entire sequence.

Processing method, calibration/ spectra plots, interactive results/ charts and more

Broad working area
View all required information in one location for fast, easy data review.

Spreadsheet based

Synced to console

> "Chromeleon CDS is much quicker in all activities. Use of the Cobra wizard allows for quick setup of optimum integration parameters giving us consistent integration much faster than either of our previous CDS."
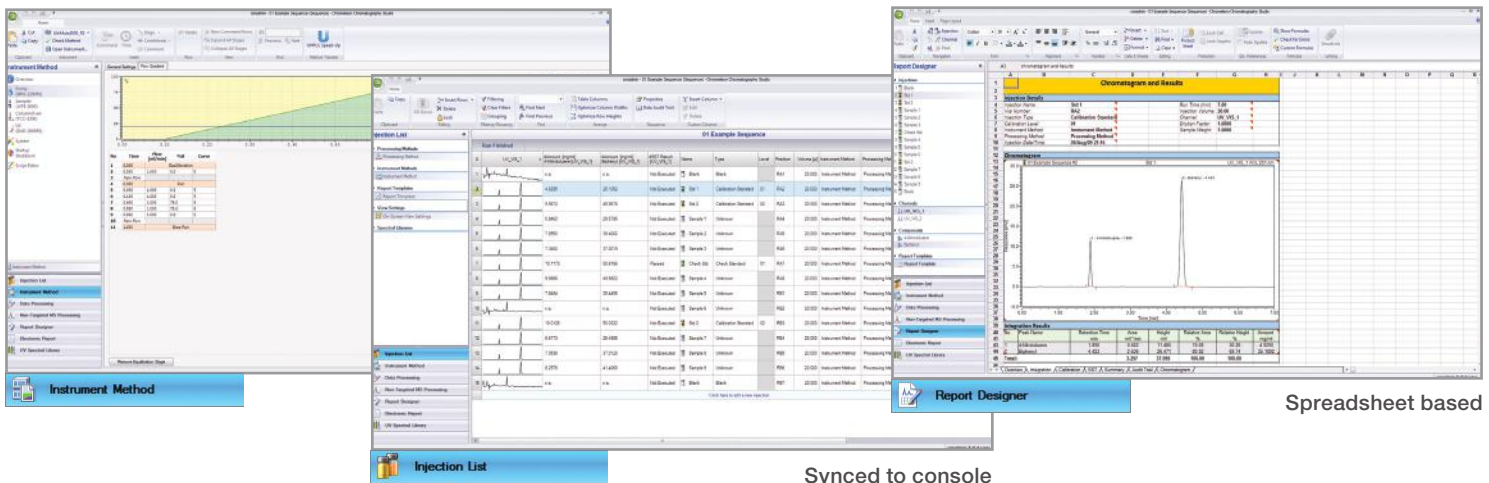>
> — Brian Alliston, Data Integrity Expert and CDS Specialist, Sterling Pharma Solutions

Increase productivity

Boost laboratory efficiency with operational simplicity and intelligent functionality

Chromeleon CDS was designed with scientists and technicians in mind. It simplifies repetitive tasks, reduces errors, and helps you to achieve more 'right first-time' analyses. These smart tools make your work faster and easier while ensuring reproducible, quality results:

- **eWorkflow Procedures**—error-free execution of each analysis to meet SOP requirements. Create complete, correct sequences with all required elements (methods, reports, structure and other files such as the SOP)

- **Smart Startup and Sequence Ready Check**—worry-free analytical runs by ensuring everything is equilibrated and ready to run

- **System Suitability Tests (SST) with Intelligent Run Control (IRC)**—automated checks for in-run pass/fail limits that can be configured to reinject samples or even abort the run and shut down the instrument based on the result

- **Report Designer**—powerful, spreadsheet-based templates simplify report creation and meet all of your reporting and charting requirements
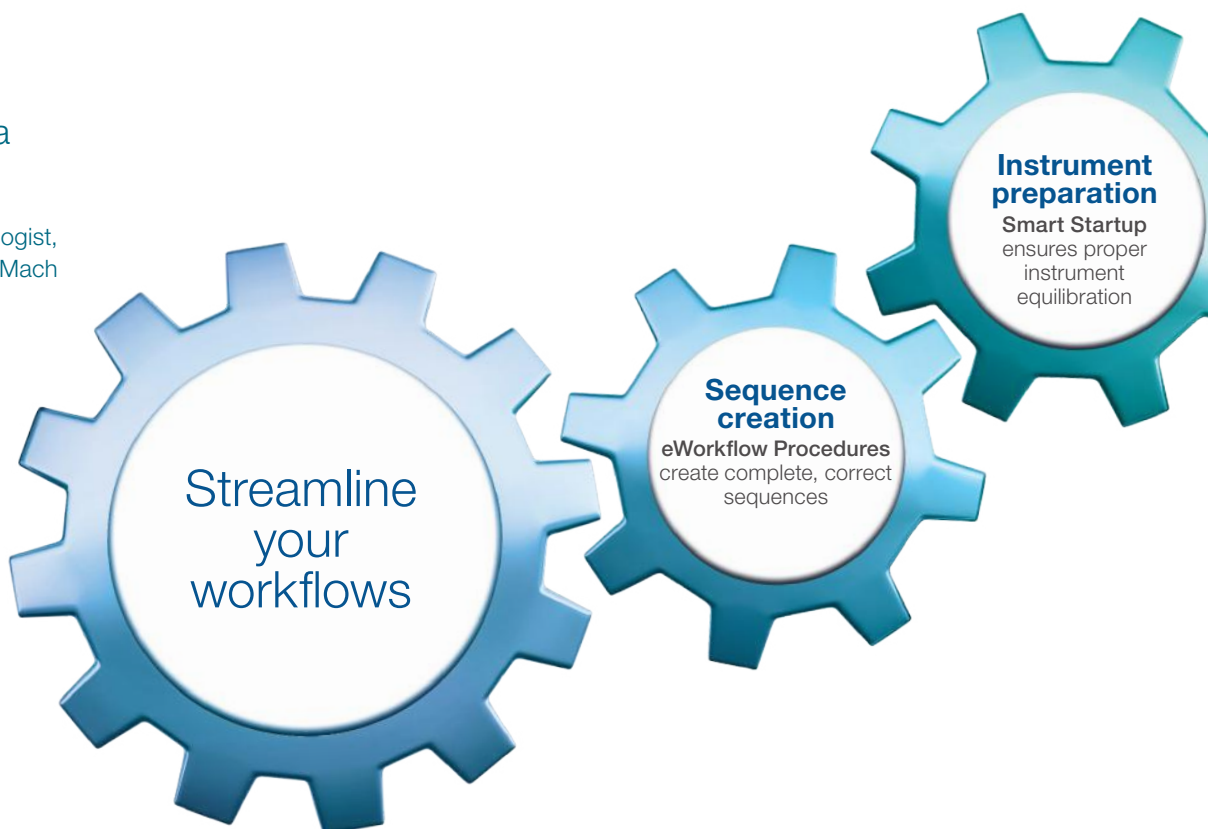
> "Chromeleon CDS is a very comprehensive and simple to use software. In a few steps, you can integrate, identify, and quantify compounds of interest and create reports, charts, and graphs, reducing data processing time."
>
> — Tiziana Nardin, Food Technologist, Fondazione Edmund Mach

Instrument preparation
Smart Startup ensures proper instrument equilibration

Sequence creation
eWorkflow Procedures create complete, correct sequences

Streamline your workflows

Increased productivity

Data reporting
Fully traceable **Report Designer** with built-in **Report Check**

Data reviewing
SmartLink for easy data evaluation and **Electronic Reports** for controlled result sharing

Data processing
Dynamic Data Processing, **SmartPeaks and Cobra Wizard** for fast data processing

Sample analysis
Ready Check finds sequence issues. **SST and IRC** monitor in-run injection quality

Faster data processing

Batch review and reprocessing of data can be very time consuming, subjective and error-prone. Smart tools increase laboratory productivity by simplifying and controlling this process, reducing errors and time spent processing, checking and reporting results.

- **MiniPlots and Result Columns**—immediate, in-sequence overview of data and results
- **Dynamic Data Processing**—all selections and changes are instantly reflected in the data and results, for all injections in the sequence, saving time

- **SmartLink**—visualize all the information needed for fast, easy data evaluation
- **Cobra™ Wizard**—quickly set optimal detection settings for each analysis in just a few steps
- **SmartPeaks™ Integration Assistant**—consistently integrate peaks with just a few clicks

AppsLab Library: Jump start your method development

Find applications and download ready-to-use eWorkflow procedures from Thermo Scientific™ AppsLab Library of Analytical Applications right into Chromeleon CDS where they can be directly executed.

Control all your instrumentation

Chromeleon CDS is the only CDS providing full control of chromatography instrumentation from Thermo Scientific and multiple other vendors, including support for quantitative mass spectrometry workflows for all separation techniques and MS variants, all using the same intuitive user interface.

## Full control of LC, IC ,GC, and MS instruments

- Superior control of Thermo Scientific GC, IC, LC and MS instrumentation across all functions
- Comprehensive, reliable control for over 540 different instrument modules, including over 300 chromatography instruments from other LC and GC vendors
- Native drivers either provided directly by, or created in cooperation with, the original equipment manufacturer

Intuitive instrument interface

- Intuitive ePanels to control your instrument and sequence
- See the status and audit trail, and easily monitor detector baselines

Integrated control of mass spectrometry instruments

- A single software to streamline your chromatography and MS quantitation workflows
- Full integration of Thermo Scientific MS instruments using native control drivers
- Powerful features bring unrivalled usability, scalability and compliance benefits to MS users
- Use your MS like any other routine detector
- MS application capabilities, including targeted peptide mapping and intact deconvolution capabilities
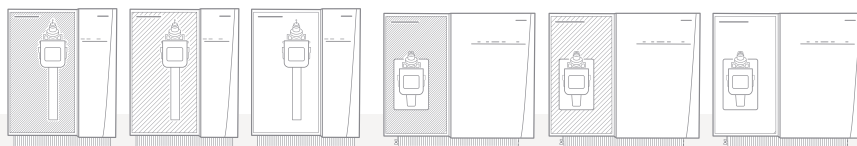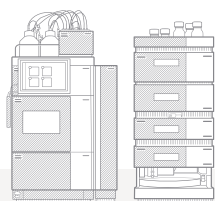
LC—Separate your science with our revolutionary LC technology

- Increased uptime with predictive wellness and service monitoring
- Intelligent instrument control with Smart Startup, Standby and Shutdown
- Advanced programming, e.g., application switching and fractionation

LC-MS(MS)—A single solution for your quantitative workflows

- Full control of single/triple quadrupole and high resolution accurate mass (HRAM) systems
- Data processing per component using MS-specific detection algorithms
- MS-specific views including TIC, XIC, mass spectra, quantitation channel, and MS component traces

> "Chromeleon CDS offers the best support for third-party instruments. Competitors' software provided only limited support for far fewer third-party instruments."
>
> – Bernd Boscolo,
> QC Improvement Projects Team Leader and CDS Administrator
> Douglas Manufacturing Ltd.
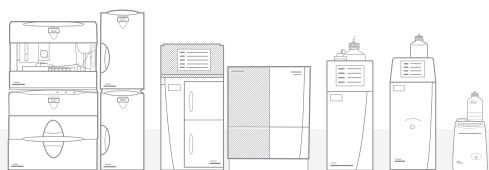
IC—Get more from our world-leading IC and IC-MS instrumentation

• Only CDS with complete control of all current IC and IC-MS systems

• Intelligent instrument control with Smart Startup, Standby and Shutdown

• Autodilution and re-injection of out-of-range samples
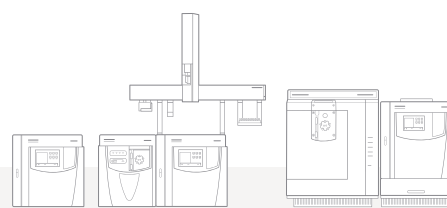
### GC and GC-MS(MS)—Chromeleon CDS gives you superior control

• All GC and MS functions including tuning and instrument calibration

• AutoSIM/AutoSRM for automated SIM/SRM method development

• Advanced injection and sample preparation modes for increased productivity

Get the most out of your data

The Chromeleon CDS flexible spreadsheet-based Report Designer provides a familiar interface simplifying the creation of user-defined report templates and eliminating data export to external spreadsheets, reducing errors.

- Produce any report you need, replacing external spreadsheets
- Deliver correct and reliable results with built-in reporting tools

- Find, collate, and report results across multiple sequences using powerful data mining tools
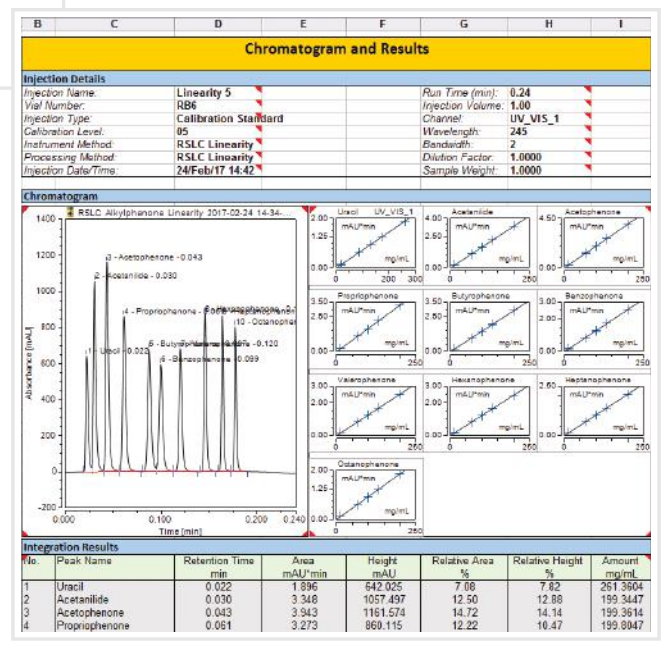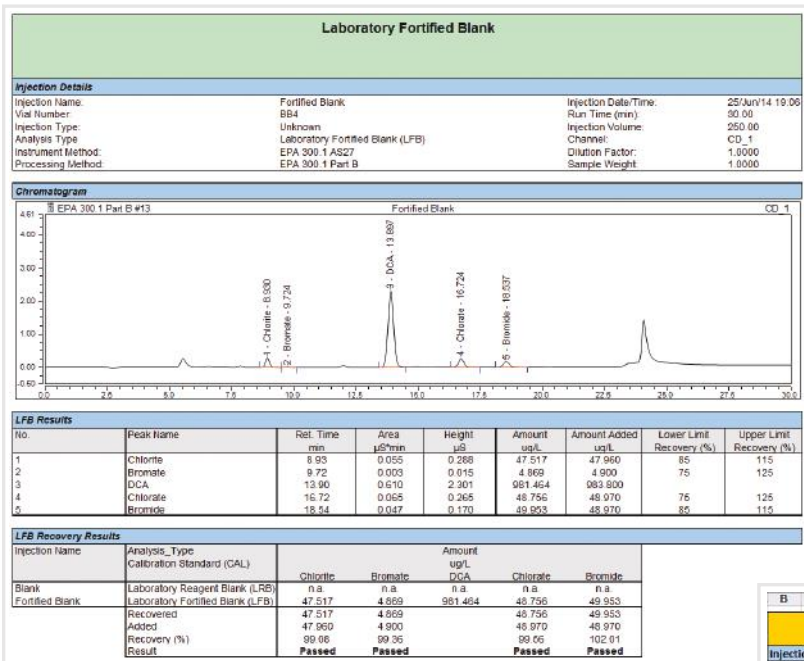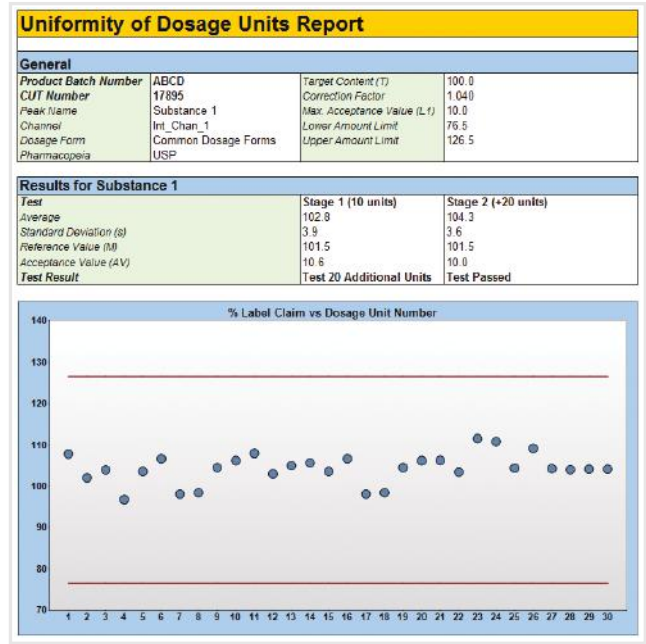

"The Chromeleon Report Designer is a mighty tool to calculate and present data, and to our understanding is far better than any other software package. With the Chromeleon Reports, we are seeing time and cost savings equivalent to four to five full-time employees depending on the workload in each month."

– Bernd Boscolo,
QC Improvement Projects Team Leader and
CDS Administrator, Douglas Manufacturing Ltd.
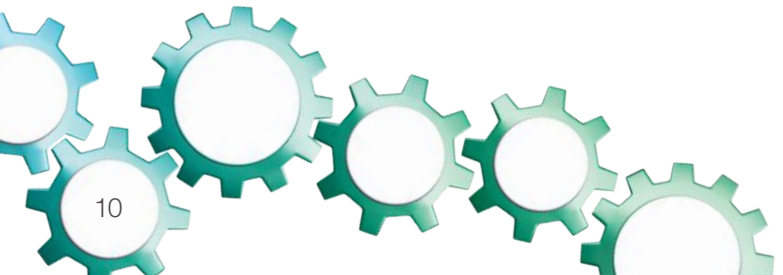
Connect your laboratory
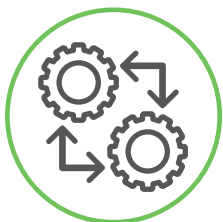
Utilizing the Chromeleon CDS client-server capabilities is your next step in achieving the highest levels of compliance, data integrity and data security, and to realize further efficiency gains.

- Scale seamlessly from a single workstation to a laboratory network, right up to a global multi-site deployment
- Be compliant with regulatory, 21 CFR Part 11 and GxP requirements and the latest data integrity guidelines

- Get 24/7 laboratory uptime with intelligent Network Failure Protection (NFP), keeping instruments running, data accessible and allowing new sequences to run
- Easily manage data, users and resources across laboratories while retaining central control

As part of the Thermo Scientific enterprise software portfolio, Chromeleon CDS integrates seamlessly with Thermo Scientific™ SampleManager LIMS™ to streamline laboratory processes and eliminate manual steps related to sample testing, results capture and analysis.

SampleManager is a single solution for laboratory information management (LIMS), scientific data management (SDMS) and procedural electronic laboratory notebook (ELN)/laboratory execution system (LES).
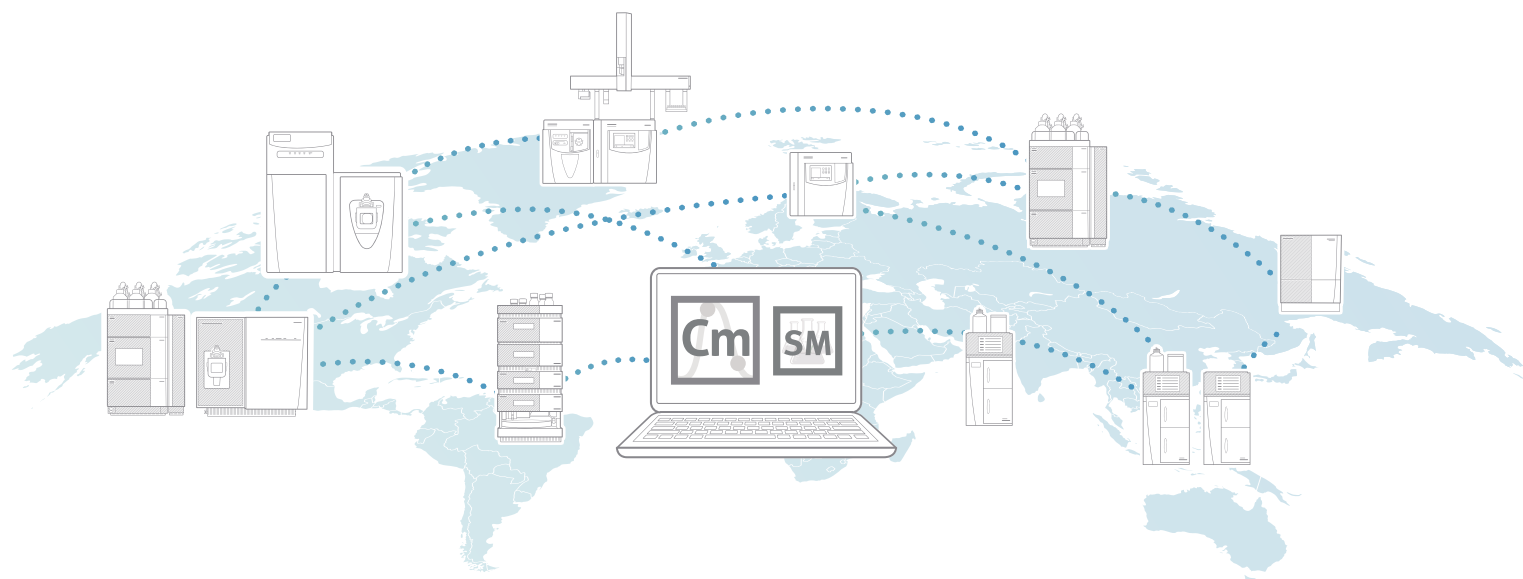
Join the Chromeleon CDS community to future proof your investment: **thermofisher.com/chromeleonsupport**

Like Charlie Chromeleon on Facebook to follow his travels and get important updates on chromatography software! **facebook.com/CharlieLovesChromatography**

Visit AppsLab Library for online access to applications for GC, IC, LC, MS and more. **thermofisher.com/AppsLab**

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