



The complete CHRONECT™ HDX workflow

Your fastest path to confident protein insights



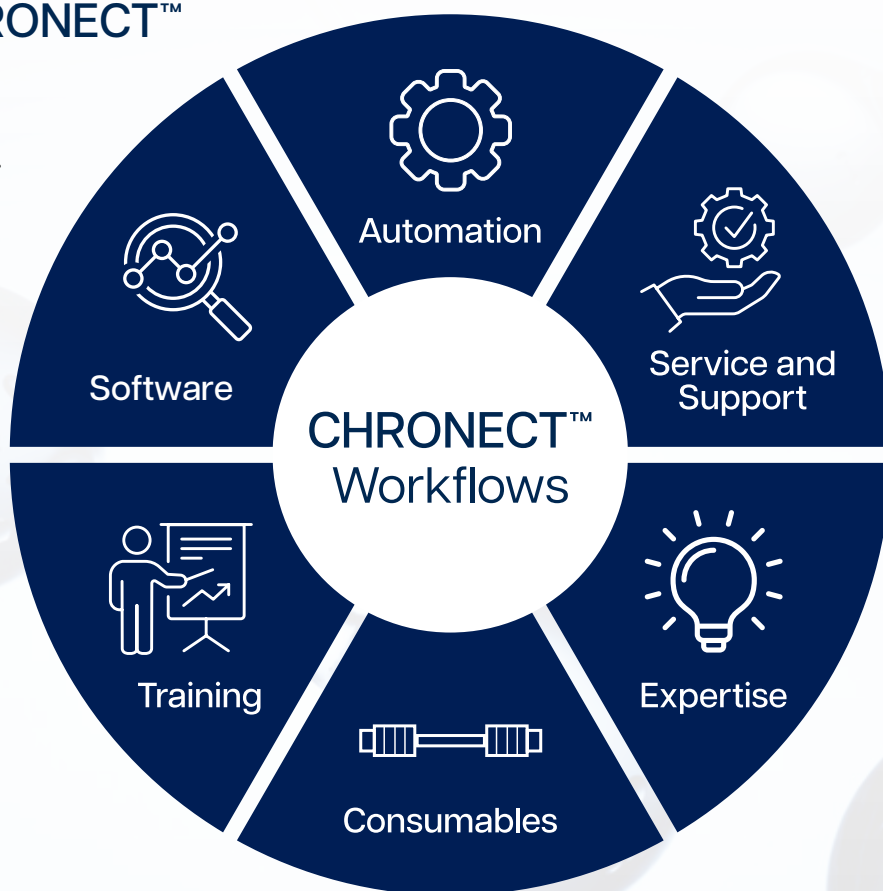
Reliable HDX requires more than automation

Successful HDX experiments depend on more than a single instrument. Reproducible results come from the interaction of automation, timing control, consumables, chromatography, data analysis, training, and support.

The CHRONECT™ HDX workflow brings these elements together in one unified solution designed to improve reproducibility, reduce variability, and accelerate structural biology research.

The complete CHRONECT™ HDX workflow

One Partner. One Workflow.
One Source of Confidence.





Designed to deliver better HDX outcomes.



Improve reproducibility

Precise timing, temperature control, and workflow-optimized consumables help support more consistent HDX results.



Increase throughput

Parallel automation and intelligent scheduling help analyze more samples, replicates, and timepoints in the same operating window.



Reduce variability

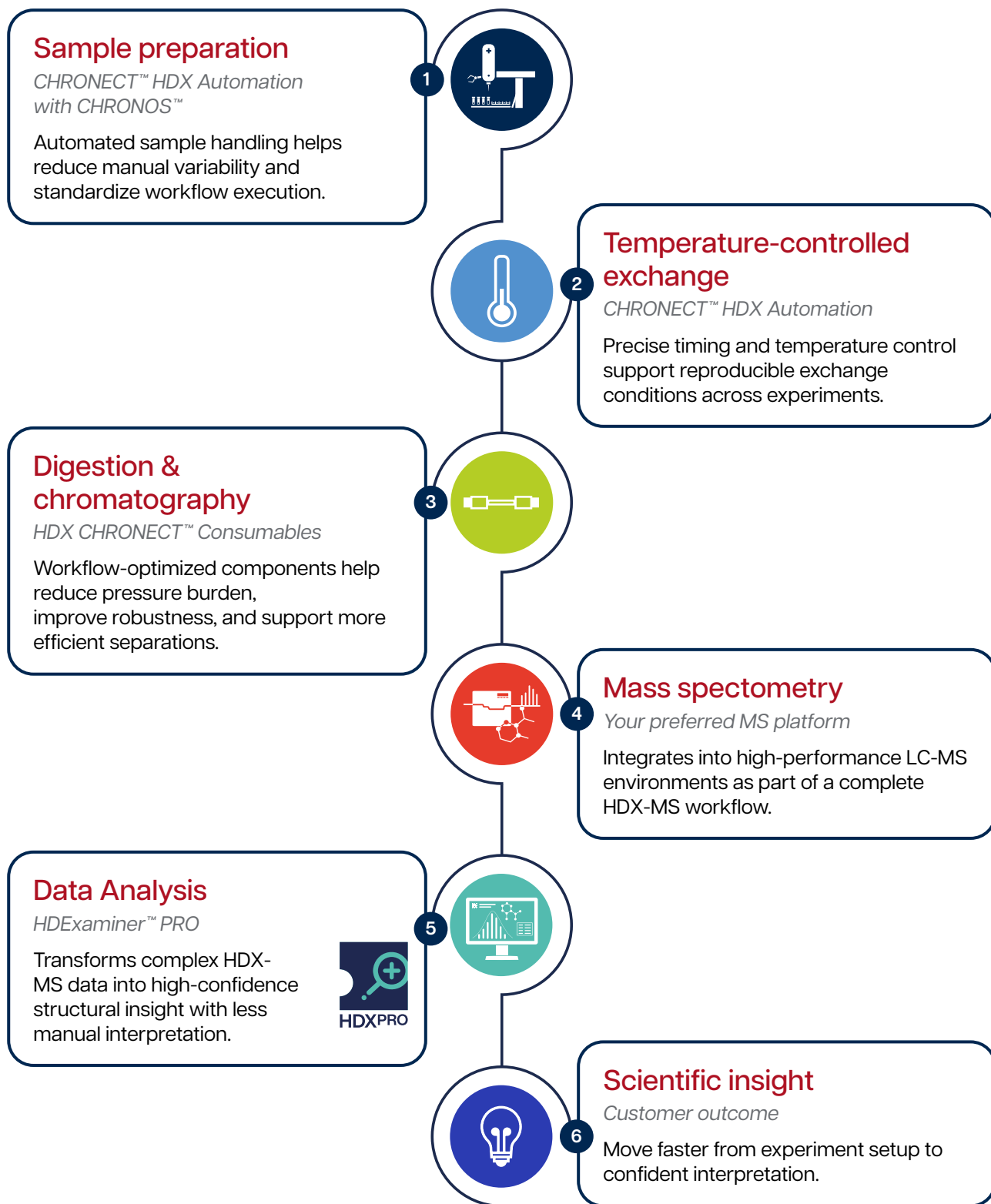
Integrated software and standardized workflows help reduce operator-dependent variability.



Accelerate discovery

A connected workflow shortens the path from sample preparation to structural insight.

More than a workstation. A complete HDX workflow.



Built for the full HDX-MS workflow

The CHRONECT™ HDX Workstation pairs automated sample handling with CHRONOS™ software to control timing, temperature, and execution at every step – from exchange and quench through injection and LC/MS initiation. The result: tighter reproducibility with far less manual intervention, in a workflow that adapts as your experimental needs evolve.

15-second time points

Capture fast structural changes and conformational events with exchange time points as short as 15 seconds.

0°C temperature control

Tightly controlled low-temperature conditions throughout critical steps minimize back-exchange and preserve sample integrity.

Up to 5x more throughput

Parallel sample processing supports more replicates, proteins, and conditions without sacrificing timing or consistency.

Centralized scheduling

CHRONOS™ coordinates exchange timing, quenching, injection, valve switching, and LC/MS initiation in one schedule – reducing manual intervention and standardizing execution across time points.

Built to integrate

The CHRONECT™ HDX workflow is designed to integrate into premium LC-MS environments for a complete, end-to-end solution – CHRONECT provides the automated workflow layer; your LC-MS platform provides the analytical backbone.

**More samples analyzed per day
with greater consistency.**



Why consumables matter in HDX

Most HDX variability does not begin at the mass spectrometer. It often starts earlier in the workflow—with digestion performance, carryover, back exchange, dead volume, column stability, and temperature control.

CHRONECT™ workflow consumables are engineered specifically for low-temperature HDX workflows to optimize performance across the entire experiment.

Workflow-optimized consumables for reliable HDX performance

Designed for the entire HDX workflow

Successful HDX experiments depend on more than automation. CHRONECT workflow consumables are purpose-built to optimize chromatography, digestion, reproducibility, and system reliability.

CHRONECT™ HDX LC Columns

The first CHRONECT analytical column optimized specifically for automated HDX-MS workflows. HDX-MS workflows are run cold, and that combination of low temperature and high pressure forces a tradeoff most labs are used to living with: shorter runtime or reliable separation, rarely both.

The CHRONECT HDX LC Column is engineered specifically to remove that constraint, giving HDX labs more headroom to optimize their methods without compromising chromatographic quality. It's built to make the analytical step of the HDX workflow less of a bottleneck and more of an asset.

CHRONECT HDX LC Columns help remove that bottleneck by delivering:

- Up to 40% lower back pressure
- Faster gradients and higher throughput
- Reduced system stress and maintenance
- Improved workflow robustness
- Seamless integration with CHRONECT HDX workflows
- More consistent execution across experiments



**Workflow optimized.
Proven to perform.**



HDExaminer PRO Software

Transform HDX-MS data into scientific insights... in just hours!

HDExaminer™ PRO is purpose-built for modern hydrogen-deuterium exchange mass spectrometry (HDX-MS), helping researchers analyze complex datasets faster, with greater confidence, and less manual effort.

Whether you're studying protein conformation, biosimilarity, ligand binding, or therapeutic candidates, HDExaminer PRO streamlines data analysis so you can spend less time processing data and more time advancing discovery.

Why HDExaminer™ PRO?



Faster analysis

What once took weeks now takes hours. Process large HDX-MS datasets in as little as 2–5 minutes per data file, analyzing up to 1,000 peptides.



Greater confidence

Data-independent acquisition (DIA)-verified peptides and redundant measurements deliver improved reproducibility and confidence for results you can trust.



Built for modern HDX

Empower your high-resolution and high-throughput HDX-MS workflows with greater peptide coverage and deeper insights into protein conformational dynamics.



Designed for novice and expert HDX scientists

A project setup wizard and guided workflows simplify analysis for all users, while advanced tools provide the flexibility and depth experienced researchers demand.

Powerful capabilities. Simplified analysis.

HDExaminer PRO combines advanced analytical capabilities with an intuitive user experience, making it easier to analyze, compare, and visualize HDX-MS data.

Analyze HDX-MS datasets using heatmaps, volcano plots, peptide maps, and kinetics plots. Export peptide maps to PyMOL and Chimera for enhanced structural interpretation.



Scalable Project Management

Organize and manage studies ranging from routine experiments to complex HDX-MS projects.

Publication-Ready Outputs

Generate high-quality figures and results for collaboration, presentations, and publication.

Automated Data Processing

Reduce manual analysis with intelligent processing workflows that improve efficiency and consistency.

Comparative Analysis

Compare multiple proteins, experimental conditions, timepoints, and replicates within a single project.

Continue exploring HDExaminer PRO



Scan to learn more and request
a complimentary software demonstration



From installation to advanced applications.

Successful HDX workflows depend on more than technology alone. The CHRONECT™ Academy helps users build confidence across the workflow—from onboarding to advanced applications.

Supported areas include



Method development



Experimental design



HDExaminer PRO training



Advanced HDX workflows



Best practices



Application guidance

Accelerate user adoption and reduce time to publication

Protect performance to preserve scientific confidence

The CHRONECT™ HDX platform delivers speed, confidence, coverage, automation, and integration. Service Contracts ensure these benefits are maintained day-to-day, year-after-year. CHRONECT™ HDX service contracts are designed to sustain the performance, reliability, and scientific value of your HDX workflows, so you can focus on accelerating discovery, not managing instrumentation

The value we deliver

- ✓ Expert-level care
- ✓ Consistent data quality
- ✓ Confidence and compliance
- ✓ Maximize uptime
- ✓ Faster recovery from issues
- ✓ Lower total cost of ownership



HDX automation to fit your needs

CHRONECT™
HDX Limited Workflow



CHRONECT™
HDX Base Workflow



CHRONECT™
HDX Advantage Workflow



CHRONECT™
HDX Parallel Advantage Workflow



CHRONECT™
HDX Extended Workflow



Specifications	Limited	Base	Advantage	Parallel Advantage	Parallel Extended
Rail length	85 cm	120 cm	160 cm	160 cm	200 cm
Chilled 250 µL syringe for Quench/Injection	✓	✓	✓	✓	✓
Backflushing of protease, trap and analytical columns	✓	✓	✓	✓	✓
Exchange reaction temperature control of 0 to 55°C	✓	✓	✓	✓	✓
Independent protease column temperature control	✓	✓	✓	✓	✓
Optional upgrade module capacity	One option only	Three options from	Four options from	Five options from	All options available
Optional 96 or 384 well microtiter plate module	•	•	•	✓	✓
Optional dual chilled syringes, 10 µL and 250 µL		•	•	•	•
Optional filtration module		•	•	•	•
Optional rapid exchange (down to 200 ms)		•	•	•	•
Optional -30°C sample storage module			•	•	•
Additional non-chilled syringe tools			•	•	•
Capacity of new module releases				•	•
Non-standard HDX modules agitator, vortexer, etc.					•



included



options



The complete CHRONECT™ HDX workflow

Our turn-key HDX solution is compatible with most MS analyzers, and can extend your current LC/MS capabilities while adding a new dimension to your protein studies.

Visit us at chronect.trajanscimed.com or contact your regional Trajan representative for more information.

Science that benefits people

Trajan Scientific and Medical develops products and services that can enable critical improvement in the analytical workflow. We aim to have positive impact on human well-being with the delivery of precision products that protect sample integrity and minimize result variation.

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