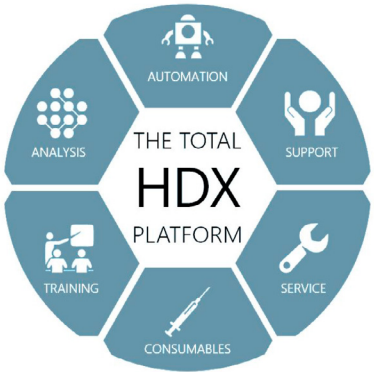
TRAJAN Automation

LEAP TECHNOLOGIES

Part of the TRAJAN Family



HDX

Gold standard in HDX

Automated Hydrogen-Deuterium Exchange

Proven, complete solution

www.leaptec.com

HDX has become an indispensable tool for protein binding studies in pharmaceutical development. LEAP Technologies has been automating HDX experiments for over 15 years, and is the industry leader in the field.

Our HDX systems are helping researchers across the globe come to answers about their proteins faster than traditional methods.

Gold standard in HDX

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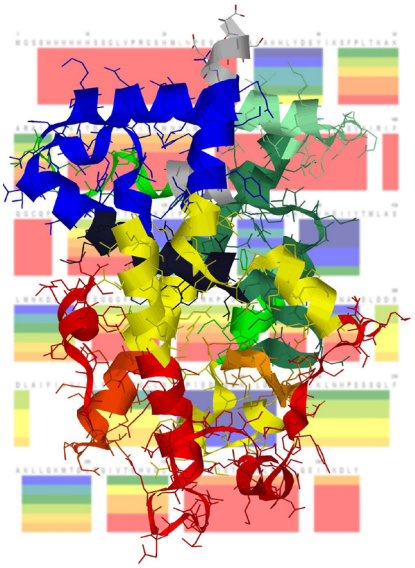
ChronosHDX control software

Meeting the challenge of producing the highest quality data sets.

HDX experiments require time-sensitive operations. Therefore, in traditional methods, an operator has to attend throughout the course of HDX experiments. However, time-controlled LEAP automation enables unattended operation using intelligent scheduling with Chronos software.

LEAP uses ChronosHDX scheduling software to automate the precise labeling and quenching of samples, as well as injection and digestion of proteins on the LC-MS analysis system.

- Precise on-exchange data point timing
- Reproducible experimental conditions
- Multi-valve control for trapping and elution of digested peptides to the LCMS system
- Throughput optimization with elimination of timing conflicts
- Simple graphic user interface
- Advanced method editing capabilities
- Compatible with leading dataprocessing software from Sierra Analytics



HDX

Successful HDX experiments

Automation addresses the 4 key factors for successful HDX experiments:

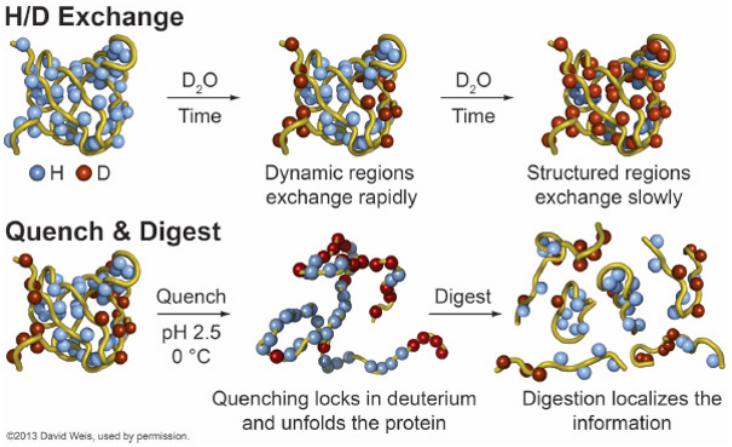
- Accurate timing, accurate liquid transfer and accurate temperature control
- pH control
- Sustained 0°C environment
- In-line digestion

Hydrogen Deuterium Exchange is an experimental technique for obtaining information about changes in the tertiary structure of proteins under different physiological conditions.

The HDx-3 PAL™ platform is an advanced, automated scheduling and experimental workstation providing ease of use, high reproducibility and exceptional data quality for HDX experiments.

Labeling
HDX relies on accurate timing of the labeling step.

Quenching
The system will optimize the timing of the labeling step to ensure quenching is just in time for the LC-MS injection, using a chilled syringe.



A typical experiment might consist of a dozen time points in triplicate for each protein sample. The HDx-3 PAL™ system will schedule the experiments and perform all steps for each time point of every sample.

Long labeling experiments are automatically scheduled first to ensure the shortest possible instrument time.

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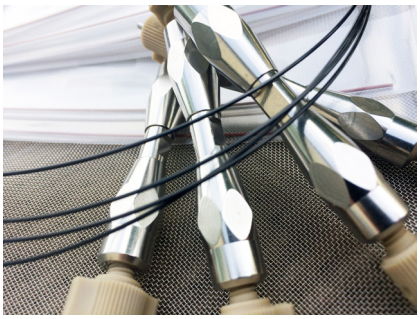
Faster answers

Powerful information on protein structure in days - not weeks. Move more quickly, make better decisions.

Expert training

LEAP Technologies has the expertise and experience with automating HDX experiments that can only come from having worked with leading scientists in the field.



Consumables designed for HDX

Columns and fluidics consumables specifically designed to optimize all aspects of the HDX user experience.

From ease of use to reliability and sample stability, your success is our number one goal.

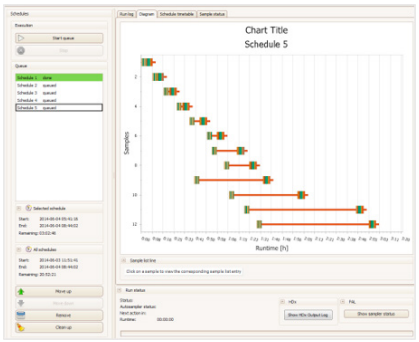
Efficient system control and optimized experimental design

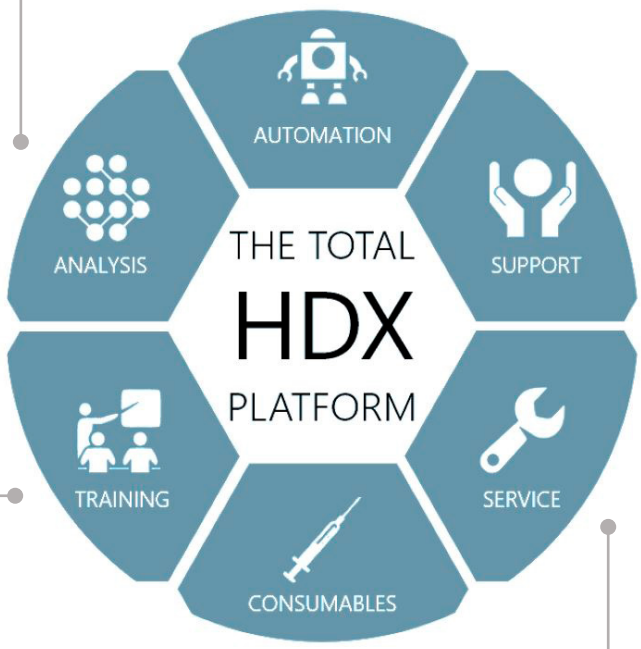
Our Chronos for HDX software now offers a streamlined interface for HDX users and automatically overlaps time points for maximum MS efficiency.

Temperature control at all steps ensures reliable data. Sustained 0°C environment reduces back exchange, improves sample stability and overall reproducibility.

Our most flexible automation platform yet offers the ability to run multiple experimental methods in the same sequence.

Native data format compatibility with HD Examiner increases high confidence data and allows you to get to results faster.





Full application support

LEAP Technologies is the leading expert in automation of HDX. Our in-house specialists and team of experienced partners offer you the best consulting available to achieve your HDX goals.

Service you can trust

Our CTC manufacturer-certified service team is ready to keep your automation at its peak performance.

HDX

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HDX Automation Systems

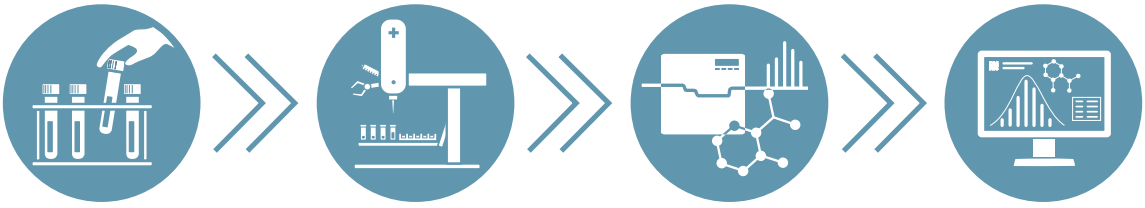
HDExaminer Sierra ANALYTICS

Native data format compatibility with HDExaminer increases high confidence data and allows you to get to results faster.

- HDExaminer finds accurate results even with overlapping peptides.
- The software works well with low resolution or high resolution data.
- Imports MS data from Agilent, AB Sciex, Bruker, Thermo, or Waters instruments, as well as mzXML or mxData.
- Imports peptide search data from SEQUEST HTML, Mascot XML Proteome Discover xls or pepXML.

...all across the globe

HDx3 PAL specifications	
On-exchange time range	10 seconds to 4+ hours, user selectable
Temperature control	±1.0°C
Temperature range	0°C to 37°C
Volumetric range	Typically 1-250 µL, use application selectable to 5000 µL
Electrical	120 VAC, 60 Hz or 220 VAC, 50 Hz
Dimensions	80 cm (W) x 38.5 cm (D) x 64.8 cm (H)
Weight	80 kg
LCMS data systems	Compatible with nearly all LCMS data systems. Direct integration with the most common



Proven, complete solution

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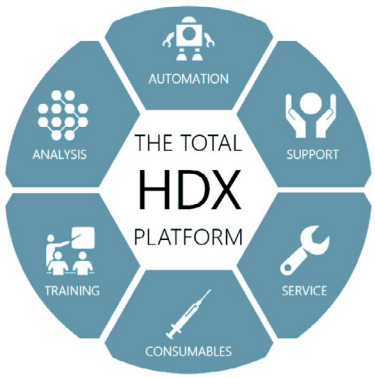
Our turn-key HDX solution is compatible with most MS analyzers, and can extend your current LC/MS capabilities while adding a new dimension to your protein studies.

Visit us at www.leaptec.com or contact your regional Trajan LEAP Automation representative for assistance.



Trajan Scientific and Medical

Science that benefits people

Trajan is actively engaged in developing and delivering solutions that have a positive impact on human wellbeing. Our vision revolves around collaborative partnerships that improve workflows, delivering better results.