Multi-Angle

Spring 2017

Contents

Training

The acclaimed Light Scattering University (LSU) course, held in Santa Barbara, CA on the American Riviera, is guaranteed to demystify light scattering, work you hard but feed you well, and explain how to get the most from your Wyatt Technology instruments.

Watch the new LSU Experience video

Upcoming classes

The next available LSU classes begin June 20, July 11, August 15 and September 12.

Dyna-LSU classes begin June 22, July 13, August 17 and September 14.

Check the full schedule

Announcing the miniDAWN TREOS II: Molar mass? Absolutely!

Your opinion is critically important to us, so when you asked for key features in the next generation MALS detector, we listened. The new miniDAWN TREOS II is user-friendly, field-serviceable *and* upgradeable; improvements made with an eye towards increasing the productivity of your SEC-MALS system and making absolute molar mass as easy as Ready. Set. Go!

User friendly: Ready? ASTRA's new Method Builder wizard lets you set up a method, optimized for your sample type, in three short steps. The front panel LS noise indicator lets you know when the column is well equilibrated and clean.

Go! ASTRA's new One-Click Molar Mass feature for the TREOS II means you can click to start a method, and come back to find the sample analysis complete. Intelligent algorithms automatically set baseline and peaks, apply alignment and band broadening corrections, and prepare a report with the central results.

Field-serviceable: The new CheckPlus diagnostic algorithms built into ASTRA assess the health of the TREOS II. This instrument has been redesigned to be fully modular, so any faulty elements can simply be replaced right in your lab.

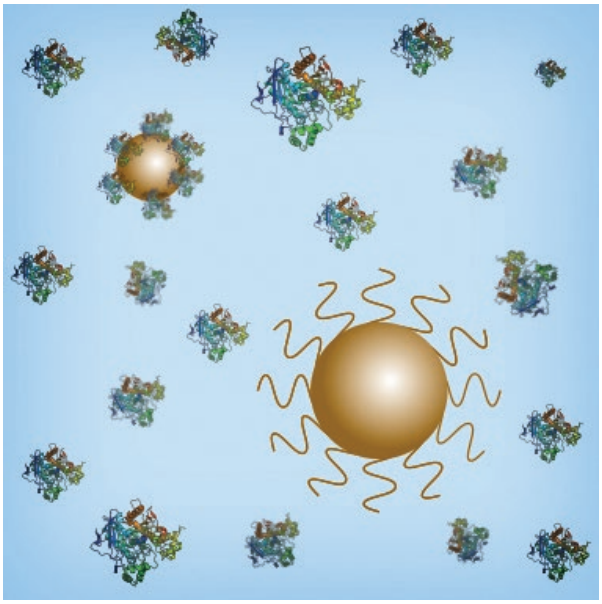
Upgradeable: Future-proof your SEC-MALS system. Should you decide to transition from HPLC/GPC to UHPLC/APC, the standard HPLC optical module can be replaced with a UHPLC-compatible micro-flow cell.

In addition, the TREOS II offers better sensitivity, with 50% higher laser intensity than the old TREOS (three times the equivalent intensity of a miniDAWN TriStar!) and more reliable leak handling. Whether adding new MALS capabilities or replacing an older instrument, you'll find absolute benefits in the TREOS II.

FDA and NIH investigate HT-DLS for nanoparticle stability

In a therapeutic nanoparticle (NP) development effort, stability under physiological conditions and multiple temperature regimes must be evaluated for several candidate NPs, over an extended time scale. In our Featured Publication 36, Ashwinkumar Bhirde *et al.* (of the FDA and NIH) successfully demonstrated the use of Dynamic Light Scattering using the DynaPro DLS Plate Reader II to assess the colloidal stability of model NPs, their interaction with serum albumin, and the impact of the interaction on colloidal stability. The study greatly benefited from the full automation and high throughput provided by the DynaPro PR2. According to the authors, "this... high-throughput method can accomplish sophisticated hydrodynamic size measurement protocols within days instead of years it would take conventional hydrodynamic size measurement techniques to achieve a similar task".

The study included measurements over a period of 3-5 days and temperature cycles between 37°C and 60°C, in both water and a medium containing bovine serum albumin (BSA). Au NP sizes ranged from 10-100 nm, and larger when PEGylated. One of the key results was the robustness of PEGylated Au NPs against the attachment of BSA, proving that high-throughput, plate-based DLS can readily distinguish between NPs coated and uncoated with protein.



Click 'Run', get molecular weight

Wouldn't it be great to click just once in ASTRA to automatically start your HPLC injection, collect and process data, and get a report with the molecular weight and size of your sample? The new One-Click Mw™ feature in ASTRA 7.1 fulfills your wish!

First, the Method Builder Wizard will help create an appropriate Default Method based on your specific application and instrument configuration in three easy steps. You can even program your Agilent HPLC system through the Method Builder, setting the pump flow rate, selecting autosampler vials for injection, and much more. If you select Automatic Processing, ASTRA will intelligently select signal baselines and sample peaks. Once your method is complete, all it takes is a single click of the 'Run Default' button to initiate the injection, start data collection, auto-process the data, and obtain a report of molecular weight of your sample.

- No more digging through System Method and My Methods folders to find your routine method.
- No more need to run separate programs for the HPLC system and Wyatt detectors.
- No more manual selection of multiple LS, UV and RI baselines, or painstakingly identifying chromatographic peaks.

Wyatt's HPLC Service 1.1 extends full compatibility to Agilent 1290 Infinity and Agilent 1260 Infinity 2 systems. If you employ an HPLC system that can be controlled by Wyatt's HPLC Service, ASTRA 7.1 will empower you with One-Click Mw.

Reviewer's Choice Awarded for DAWN HELEOS

At the recent Pittsburgh Conference (PittCon) held in Chicago, IL March 6-9, 2017, Wyatt Technology was pleasantly surprised to learn that we had won a Scientist's Choice Award® from SelectScience. The active roster of 300,000+ SelectScience customers were invited to participate in the process by nominating, voting and reviewing companies of their choosing.

With such illustrious—and much better known companies (Agilent, Bruker, Thermo and Waters—to name but a few) in the mix—Wyatt Technology carried the trophy away for the Reviewer's Choice Award™ for Instrument of the Year for the DAWN HELEOS MALS detector. Dr. Wyatt, Cliff and Geof figured that this was probably going to turn out to be a "LaLa Land" type of Academy Awards goof, but when the applause died down no one was running around whispering that a mistake had been made! And no one from any of the afore-mentioned companies tried to take the trophy away from Dr. Wyatt. View his acceptance speech here. Read the editorial article of the Choice Awards here.

The award recognizes the significance of our customer service and support, as well as the engineering and technical know-how that goes into every DAWN HELEOS. We were thrilled to be acknowledged in such a public venue, and with such prestigious competition. But none of this would have been possible were it not for the enthusiastic voting of our loyal and delighted customers. Without them we'd all be working elsewhere. Their feedback, criticisms and accolades have all coalesced to make us the company we are today. We want to thank them for pushing us to be even better.

Wyatt staff gathers for ribbon-cutting ceremony at new facility

Most of the boxes have been unpacked. Furniture that didn't survive the move has been recycled. New logos have been stenciled on the glass. Our company sign has been hoisted into place on the building's façade.

Yes, our move from 6300 Hollister Avenue to 6330 Hollister Avenue—a distance of only about 100 meters—is complete! Next time we need to make sure we move at least a few blocks away; that way we'll get some moving vans to transport everything from one space to another. Our distance between facilities was so short this time, that everything was hand-carried, or put on carts and wheeled through the parking lot. There must have been thousands of trips back and forth! It took hundreds—if not thousands—of miles of steps to get the job done. But the move is now complete and we're learning where the kitchen, new conference rooms (not to mention the Restrooms!), offices, machine shop, labs, IT and everything else are now housed.

Our space has now expanded by 50% so that we now occupy nearly 4,200 square meters of office building! And it's all official: Dr. Wyatt cut the ceremonial ribbon on March 23 to inaugurate our presence. With more room, we can accommodate more customers in our labs. LSU classes can now fit more students, and our company is unified under one roof once again—something that has been 2-plus years in the making.

Upcoming events

Live webinar - June 6

"Absolute biophysical characterization with Multi-Angle and Dynamic Light Scattering"

Presented by Ms. Vivianna Day

Traditional size exclusion chromatography (SEC) with UV or refractive index (RI) detection have several limitations that can significantly affect the scientific outcome. Chromatography systems with one detector are limited to measure the relative molecular weight of molecules that have similar chemical properties and conformation of reference proteins or polymers that were used to calibrate the column. Multi-angle light scattering (MALS) and dynamic light scattering (DLS) detectors in-line with SEC-UV or RI are essential instruments that resolve those inherent deficiencies by providing a first-principles characterization of molecular weight and size, independent of column calibration. A SEC-MALS-RI or UV with DLS system extends the characterization range of biomolecules to glycoproteins, PEGylated proteins, hydrophobic proteins, biopolymers, and other biomolecules.

This webinar will present the benefits of SEC-MALS and DLS by measuring absolute molecular weight, size, and composition of a variety of samples. We will present key analytical methods with the latest MALS, DLS and RI instrumentation that overcome the limitations and uncertainties of standard SEC.

Southern CA Protein & Biotech User Meeting

June 7, 2017 – San Diego, CA

SF Bay Area Protein & Biotech User Meeting

September 20, 2017 – San Francisco, CA

LSU classes

LSU classes
June 20-22
July 11-13
August 15-17
September 12-14
October 17-19
November 7-9
December 5-7

Dyna-LSU classes
June 22-23
July 13-14
August 17-19
September 14-15
October 19-20
November 8-9
December 7-8

Register now

What's new @Wyatt

Recently added on-demand webinars

- Analyzing Ebola virus glycoprotein and its interactions with therapeutic antibodies using CG-MALS
- High-throughput Analytics for Formulation and Process Development of Bio- and Nano-therapeutics
- High Throughput Tools for Optimizing Drug Nanosuspensions
- The Molecular Tool-kit of Hemorrhagic Fever Viruses

Publications, blog posts, and press releases

- Protein Aggregate Assessment of Ligand Binding Assay (LBA) Reagents Using SEC-MALS
- Screening Developability and Pre-Formulation of Biotherapeutics with High-Throughput Dynamic Light Scattering (HT–DLS)
- High-Throughput Tools for Optimizing Drug Nanosuspensions
- Wyatt presents Polymer Characterization seminar hosted by the University of Minnesota
- DynaPro High-Throughput Dynamic Light Scattering Instrument Now Available with 21CFR11 Compliance

Career opportunities

Delight is our passion. Wyatt customers know they can rely on Wyatt to provide the best instruments, training and support available. If delighting customers with cutting-edge science is your passion, Wyatt may be the place for you! Check the Careers page or click on a job link on the right to see a detailed description of each position.

North American Customer Service & Support
Field Application Scientist - Mid-West Region Sales
Field Application Scientist - Texas Region Sales

North American Sales
Regional Sales Manager - Mid-West Region
Regional Sales Manager – Southwest Region
Regional Sales Manager - Texas Region

Wyatt Technology Europe
Field Sales Engineer
Inside Sales Coordinator
Application Scientist

Keep in touch

As a small, family-owned and operated company, we consider every customer to be part of the Wyatt Technology family. We do our best to get to know you first-hand, and, as a family, we like to keep in touch! Several social media channels help us accomplish this:

Wyatt Technology | LinkedIn
Stay up-to-date with notifications on our latest events, webinars, blogs and career openings.

Social@Wyatt
Join our community for topical discussion groups.

Linkedin Groups
Ask your light scattering peers for advice, keep up-to-date with the latest Wyatt news, or reconnect with LSU classmates through our LinkedIn groups.

Wyatt Technology Group
Open to anyone interested in the technology and applications of light scattering for characterization of macromolecules and nanoparticles in solution. Get the latest news and join the technical discussions.

Light Scattering University Graduates
For active users of Wyatt instruments.

Light Scattering for the Masses®