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NEWS RELEASE

Waters Debuts Industry-First Extended-Range MALS Detector for UHPLC/UPLC, Powering Rapid Characterization of Large Molecules

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- Delivers up to 4x faster chromatographic run times to accelerate decisions across discovery, development, and quality workflows.[1,3]
- Achieves 10x improvement in absolute molar mass and extended sizing, without compromising resolution or analytical throughput.[2]
- Reduces sample consumption by 30-50% and solvent use by approximately 40%.[3]

MILFORD, Mass., April 14, 2026 /PRNewswire/ -- Waters Corporation (NYSE: WAT) today announced the launch of the Waters omniDAWN™ Multi-Angle Light Scattering (MALS) Photometer, part of the Wyatt Technology Portfolio. Featuring 18 angles of detection, the omniDAWN Photometer is the first extended-range MALS detector for Ultra High Performance Liquid Chromatography (UHPLC) and Ultra Performance Liquid Chromatography (UPLC) workflows, delivering absolute molar mass and size measurements without compromising resolution or throughput.

The omniDAWN MALS Photometer extends UPLC-compatible sizing ten-fold, from approximately 50 to 500 nm in radius, enabling reliable characterization of larger, more complex analytes such as protein aggregates, viral vectors, lipid nanoparticles (LNPs), and advanced materials. Because it provides absolute molar mass and size, the omniDAWN Photometer reduces reliance on column calibration standards and supports faster results and more confident comparisons, streamlining work across biosimilarity studies, antibody-drug conjugate (ADC) characterization, and viral vector analytics. As these modalities and other advanced therapeutics move into late-stage development and quality control, laboratories increasingly rely on UHPLC and UPLC Systems to meet rising throughput and resolution requirements.

"Advances in UHPLC and UPLC separations for complex biologics and newer modalities have outpaced detector technology, until now," said Rob Carpio, Senior Vice President, Waters Analytical Sciences, Waters Corporation. "The omniDAWN MALS Photometer brings extended-range multi-angle light scattering to modern separations. This means our customers can move faster while maintaining the resolution, robustness, and depth of characterization needed to accelerate the discovery, development, and quality control of next-generation therapies."

Integrating seamlessly with Waters UPLC Systems and columns, the omniDAWN Photometer eliminates traditional trade-offs between dispersion, robustness, and analytical performance, delivering a complete solution for multi-attribute characterization with improved usability[2] compared to micro-volume MALS approaches. When paired with UHPLC or UPLC Systems, the omniDAWN Photometer supports run times up to four times faster than conventional HPLC workflows, while reducing sample consumption by 30–50% and solvent use by approximately 40%.[1,3] Its low dispersion design preserves resolution[3] and sensitivity,[1,2] while delivering high-quality data across complex samples.[1,2] Sharper separations enhance the detection of low-level species, helping scientists distinguish monomer, aggregates, and fragments with greater clarity, supporting informed decision-making across discovery, development, and quality workflows.

"Extending the capabilities of multi-angle light scattering to UHPLC and UPLC analysis will enable absolute molar mass measurements, paired with faster and more flexible separations. This represents a critical leap forward in MALS-based analyses, empowering us to better understand the structure of complex materials across drug delivery and environmental nanotechnology applications, ultimately supporting improved health outcomes," said Stacey Louie, Associate Professor, Department of Civil and Environmental Engineering, University of Houston.

The omniDAWN Photometer is powered by ASTRA™ Software, built on more than 40 years of light scattering innovation. By integrating MALS with ultraviolet (UV) and refractive index (RI) detection, ASTRA Software enables comprehensive analysis of size, composition, and heterogeneity in a single run, with dedicated workflows for ADCs, LNPs, and viral vectors. The platform is 21 CFR Part 11 and EU Annex 11 compliant and will be compatible with Waters Empower™ Software later this year.

The Waters omniDAWN MALS Photometer will be available globally in summer 2026. To learn more or request a demo, visit **www.wyatt.com/omniDAWN**.

Additional Resources:

- **Product Page**

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About Waters Corporation:

Waters Corporation (NYSE: WAT) is a global leader in life sciences and diagnostics, dedicated to accelerating the benefits of pioneering science through analytical technologies, informatics, and service. With a focus on regulated, high-volume testing environments, our innovative portfolio harnesses deep scientific expertise across chemistry, physics, and biology. We collaborate with customers around the world to advance the release of effective, high-quality medicines, ensure the safety of food and water, and drive better patient outcomes by detecting diseases earlier, managing routine infections, and combating antibiotic resistance. Through a shared culture of relentless innovation, our passionate team of ~16,000 colleagues turn scientific challenges into breakthroughs that improve lives worldwide. For more information, please visit **www.waters.com/about**.

References:

Comparative column and peak width analysis using UHPLC/UPLC versus HPLC SEC formats; internal evaluation. Source: **internal data**.
Performance and range of 3-angle MALS compared to 18-angle MALS detector across representative analytes. Source: **internal data**.
Performance comparison to conventional HPLC.

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