



NEWS RELEASE

Waters Launches Charge Detection Mass Spectrometry Technology to Accelerate the Development of Next-Generation Biotherapeutics

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Headlines:

- Xevo™ CDMS facilitates direct, accurate mass detection for the largest, most heterogeneous biomolecules.¹
- Enables accurate analysis of protein complexes, nucleic acids, and gene delivery vehicles, including distinguishing between empty, partial, full, and overfull viral vector capsids in less than 10 minutes per sample.²
- Decreases sample volumes by 100 times vs. current methods for assessing cells and nucleic acids.³

MILFORD, Mass., Oct. 13, 2025 /PRNewswire/ -- Waters Corporation (NYSE: WAT) today unveiled the **Waters Xevo Charge Detection Mass Spectrometer (CDMS)**, delivering unmatched measurement and characterization for the broadest range of mega-mass biomolecules central to next-generation therapeutics and structural biology. With the rapid growth of cell and gene therapies, mRNA, and complex protein therapeutics, scientists face significant challenges in analyzing increasingly large and heterogeneous drug modalities – yet existing tools are limited in resolution, sensitivity, and compliance-readiness. The Xevo CDMS System addresses these gaps with direct, individual-particle mass measurement for molecules up to 150+ MDa, enabling previously unattainable analysis of protein complexes, nucleic acids, lipid nanoparticles, viral vectors, and more.

Waters Xevo CDMS delivers unmatched characterization for mega-mass biomolecules central to next-generation therapies.

"Waters continues to make strategic investments in large molecules, recognizing that advanced tools for bioanalytical characterization play a critical role in driving therapeutic breakthroughs. Today, we are proud to introduce the first-of-its-kind Xevo Charge Detection Mass Spectrometer, enabling the

precise analysis of previously unmeasurable molecules," said Udit Batra, Ph.D., President and Chief Executive Officer, Waters Corporation. "We believe the Xevo CDMS will accelerate the global development of genetic medicines and other advanced modalities by providing a greater understanding of the characteristics of large molecules earlier in development, which is crucial for making life-changing therapies more accessible to patients."

The Waters Xevo CDMS provides confident analysis of new modalities, like empty, partial, and full viral vector capsids, using up to 100-fold less sample volume than that required by current techniques, and delivering results in less than ten minutes, even at concentrations as low as 10^{10} vp/mL. This new capability paves the way for real-time characterization of gene therapies during process development – ultimately improving the safety and efficacy of advanced therapies. Additionally, CDMS absolves the need for deconvolution or digestion approaches to achieve simple and accurate analysis of complex molecules. This transformational mass spectrometry advancement supports a wide range of applications – from discovery and research, through process development, to regulatory approval and manufacturing.

"Our mission is to accelerate the development of gene therapies for genetically mediated cardiovascular diseases and Alzheimer's, where there is a significant unmet need in treatment options," said Timothy Fenn, Ph.D., Vice President, Analytical Development and Quality Control, Lexeo Therapeutics. "With CDMS, we're asking questions we didn't know we could ask. It's a game-changer for our analytical workflows, enabling us to generate accurate, reproducible results in minutes."

At the heart of the Xevo CDMS is the Electrostatic Linear Ion Trap (ELIT), which provides direct measurement of individual ions through simultaneous measurement of their mass-to-charge ratio and mass. The novel technology was developed by Indiana University and Megadalton Solutions, founded by Distinguished Professors Martin Jarrold and David Clemmer at Indiana University. Waters acquired the technology assets and intellectual property rights of Indiana University in 2022 to accelerate its path to commercialization.

The Waters Xevo CDMS System is powered by the GxP-ready waters_connect™ Software and is available to order now.

ABOUT: Waters Corporation (NYSE:WAT) is a global leader in analytical instruments, separations technologies, and software, serving the life, materials, food, and environmental sciences for over 65 years. Our Company helps ensure the efficacy of medicines, the safety of food and the purity of water, and the quality and sustainability of products used every day. In over 100 countries, our 7,600+ passionate employees collaborate with customers in laboratories, manufacturing sites, and hospitals to accelerate the benefits of pioneering science.

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Additional Resources:

- **Product Page**

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References:

¹ Demonstrated mass analysis on-instrument of various molecular species from <100 kDa to Chikungunya Virus complexes of >150 MDa.

² Time taken to acquire a statistically representative number of ions to enable characterization of AAV features.

³ Indicative of amount of sample required for sample preparation. Actual sample consumed during analysis is <5 µL.

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