Waters™

NEWS RELEASE

Waters Unveils Cyclic IMS P20 MS: The New Benchmark in Structural and Spatial Omics

2026-06-01

- >10x step-change in MS/MS sensitivity paired with multipass Cyclic™ Ion Mobility Spectrometry (IMS) reveals subtle biological differences for earlier, previously unattainable detection of disease signals.
- 50% extended upper mass range and comprehensive suite of structural tools advance the development of next-generation biotherapeutics.
- Integrated MALDI XS and DESI XS imaging with high-resolution ion mobility enables direct visualization of molecules in tissue, improving understanding of how disease develops at the cellular level.

MILFORD, Mass., June 1, 2026 /PRNewswire/ -- 74th ASMS Conference on Mass Spectrometry and Allied Topics—Waters Corporation (NYSE: WAT) today announced the launch of the **Waters Cyclic IMS P20 Mass Spectrometer**, a high-resolution structural and spatial omics platform designed to help scientists see biology more clearly, and act on it faster. Combining multipass Cyclic Ion Mobility Spectrometry with an enhanced suite of fragmentation, probing, and imaging capabilities, this unique and powerful instrument delivers confident insights for the early detection of disease signals, from protein misfolding to post-translational modifications. The system's full-spectrum molecular imaging unlocks unparalleled visualization within a single experiment[1] to accelerate discovery and development, and power deeper understanding of complex biology.

"Waters recognizes that advanced tools for structural and spatial omics play a critical role in delivering therapeutic breakthroughs," said James Hallam, Vice President & General Manager, Liquid Chromatography-Mass Spectrometry, Waters Analytical Sciences, Waters Corporation. "With its powerful fusion of capabilities, the Cyclic IMS P20 MS delivers a previously unattainable view into subtle molecular differences, unlocking a new level of understanding of the mechanisms that drive disease and advancing next-generation discovery."

As researchers pursue larger and more heterogeneous therapeutic targets, analytical workflows need higher sensitivity, higher structural resolution, and easier-to-adopt methods. The Cyclic IMS P20 Mass Spectrometer meets that need with a more than a 10-fold increase in MS/MS sensitivity compared to its predecessor,[2] an upper mass range extended by more than 50% to over 100 kDa,[3] and a set of complementary structural probing approaches, including tandem ion mobility spectrometry (IMS^n), electron-capture dissociation (ECD), surface-induced dissociation (SID), and collision-induced unfolding (CIU) – delivering the most comprehensive spatial and structural molecular view within a single platform.

"My lab studies proteins involved in misfoldings that drive human disease, which are notoriously difficult to characterize. We leverage the advanced capabilities of Cyclic IMS P20 MS to perform complex tandem ion mobility experiments on low-abundance forms of a key molecule involved in the pathogenesis of Type II diabetes," said Kostas Thalassinos, Ph.D., Professor of Mass Spectrometry and Academic Lead, Institute of Structural and Molecular Biology, University College London. "The increase in sensitivity delivered by the new functionality is truly remarkable. It stands to significantly accelerate our analyses, potentially by an order of magnitude, and enables us to probe critical low-abundance species in far greater detail. These rare molecular populations are essential for delineating the mechanisms that drive human disease."

The Cyclic IMS P20 Mass Spectrometer also brings Matrix-Assisted Laser Desorption/Ionization (MALDI) and Desorption Electrospray Ionization (DESI) imaging sources together in one system, pioneering their combination with advanced multipass cyclic ion mobility and IMS separation to help researchers see more, with greater clarity, directly in their samples. This unique approach broadens coverage across small molecules, lipids, peptides, and proteins, while separating isobaric and stereoisomeric compounds. Additionally, the system delivers multi-dimensional insights that elucidate links between molecular composition and the tissue microenvironment, supporting biomarker identification directly from tissue. These rich, easily-interpreted molecular maps provide increased confidence in lipidomics, drug and metabolite localization, translational research, and other experiments requiring visualization.

The Waters Cyclic IMS P20 Mass Spectrometer will be showcased at ASMS 2026 and is expected to be available globally beginning September 2026. For more information or to request a demo, visit **product page**.

Additional Resources:

- **Product page**

The P in Cyclic IMS P20 denotes Premium, the highest performance tier from Waters, and 20 reflects the platform's evolution from the SELECT SERIES lineage under Waters' new product naming convention.

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:

Imaging modality performance and ion mobility separation examples in tissue; based on internal Waters testing, protocol and sample details on file.
Up to 10x MS/MS sensitivity comparison (Cyclic IMS P20 vs prior generation instrument) based on internal Waters testing; protocol and sample details on file.
Upper mass range specification and representative analytes; based on internal Waters testing; see Cyclic IMS P20 Specification sheet.

Contact:

Molly Gluck
Head of External Communications
Waters Corporation
508.498.9732
molly_gluck@waters.com

View original content to download multimedia:**https://www.prnewswire.com/news-releases/waters-unveils-cyclic-ims-p20-ms-the-new-benchmark-in-structural-and-spatial-omics-302786888.html**

SOURCE Waters Corporation