

New, Versatile High-Resolution Mass Spectrometer Expands Market-leading Thermo Scientific Orbitrap Platform

Thermo Scientific Orbitrap Exploris 240 mass spectrometer drives discovery and identification with quantitative precision and accuracy to meet customers' specific analytical requirements

SAN JOSE, Calif., May 26, 2020 /PRNewswire/ -- A new generation, high resolution mass spectrometer (MS) is designed to give proteomics, metabolomics, biopharmaceutical characterization and small-molecule scientists the analytical performance required for research and high-throughput analyses. The new system will help drive discovery and identification with increased accuracy for confident scale-up while operational simplicity and speed streamline time to results.

The [Thermo Scientific Orbitrap Exploris 240 mass spectrometer](#) expands the proven Orbitrap Exploris platform and delivers mass accuracy, sensitivity and resolving power across a wide dynamic range. With new-generation system architecture and instrument control software, the system provides simple yet powerful data acquisition capabilities, addressing the most demanding analytical challenges for small- and large-molecule applications. The system offers positive/negative mode switching for comprehensive sample coverage, fast scan speeds and functionalities including [Thermo Scientific AcquireX intelligent data acquisition workflow](#) that enable greater automation.

"Scientists are seeking technologies that can streamline and speed proteomics studies to clinical applications, reduce time to market for candidate biotherapeutics and address the growing challenge of characterizing novel chemical entities in small-molecule studies," said Iain Mylchreest, vice president, research and development, analytical instruments, Thermo Fisher Scientific. "As part of our expanded portfolio of new-generation instruments, the Orbitrap Exploris 240 mass spectrometer delivers the high performance and versatility needed to drive productivity across multiple applications."

Dr. Timothy Garrett, associate professor, department of pathology, immunology and laboratory medicine, co-director of the Southeast Center for Integrated Metabolomics, University of Florida, said, "Using the Orbitrap Exploris 240 mass spectrometer has been extremely user friendly, with one-click calibration and method templates for fast instrument setup. The system reproducibility in mass accuracy and peak integrated area over several sample batches and several days of acquisition has been impressive. This is very important for our large-scale metabolomics projects enabling minimum post-acquisition data manipulation to yield high quality results."

The Thermo Scientific Orbitrap Exploris portfolio of high-resolution, accurate-mass (HRAM) systems, which launched in 2019 with the [Thermo Scientific Orbitrap Exploris 480 mass spectrometer](#), now includes two new, highly capable instruments, the Thermo Scientific Orbitrap Exploris 240 and [Thermo Scientific Orbitrap Exploris 120 mass spectrometer](#), allowing customers to easily transfer knowledge and methods from research and discovery to routine testing. The Orbitrap Exploris 480 and 240 mass spectrometers are fully compatible with the [Thermo Scientific FAIMS Pro interface](#) to achieve enhanced identification of proteins and peptides. Improved quantitative performance for translational proteomics and high-throughput studies will enable researchers to accelerate the translation of discoveries into clinical applications.

Dr. Jonathan Bones, principal investigator, National Institute for Bioprocessing Research and Training, said, "The Orbitrap Exploris 240 mass spectrometer is a reliable and flexible solution for high-performance biopharmaceutical characterization and achieves impressive sensitivity for native MS analyses. With the [Thermo Scientific Vanquish Duo UHPLC systems](#) running in tandem mode, there is no more waiting during column equilibration; the mass spectrometer constantly acquires valuable data with all the available features

of the [Thermo Scientific Chromeleon Chromatography Data System \(CDS\) software](#). The system is a must-have instrument for analytical and characterization laboratories supporting biopharmaceutical development and manufacture."

Performance of the Orbitrap Exploris 240 mass spectrometer is further enhanced with access to powerful new software functionality to improve data acquisition and processing:

- Proteomics scientists will benefit from the latest artificial intelligence (AI) technology with [Thermo Scientific Proteome Discoverer 2.5 software](#). The new release utilizes deep learning tools to provide a more accurate prediction of mass spectra, improving confidence in peptide identification.
- Supporting scientists developing new biopharmaceuticals, [Thermo Scientific BioPharma Finder 4.0](#) software delivers enhanced flexibility for the analysis of intact proteins, sub-unit mass analysis, peptide mapping and oligonucleotide analysis. Direct transfer of data processing parameters to [Thermo Scientific Chromeleon Chromatography Data System \(CDS\) software](#) enables compliance-ready analysis for peptide monitoring and quantitation of proteins.
- With [Thermo Scientific Compound Discoverer 3.2](#) software, small-molecule researchers are supported through extensive characterization capabilities, access to multiple mass spectral fragmentation library and structural database sources. Access to the large [Thermo Scientific mzCloud](#) mass spectral fragmentation library enhances connectivity and characterization for small molecule applications to help identify compounds.
- The launch of [Thermo Scientific Xcalibur 4.4 software](#) brings the AcquireX intelligent data acquisition workflow to the Orbitrap Exploris family of mass spectrometers, allowing greater automation for structural identification and characterization of small molecules.

Thermo Fisher Scientific will showcase its newest products and software solutions in a company-hosted virtual event, [vLC-MS.com](#), from May 26-28, 2020, and at the [American Society for Mass Spectrometry \(ASMS\) Reboot Program](#), from June 1-12, 2020.

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