proteomics

thermoscientific

Proof of performance

Orbitrap Exploris 240 mass spectrometer

Optimized methods and workflows that save time on instrument setup

Summary

The Thermo Scientific™ Orbitrap Exploris™ 240 MS provides fully integrated instrument control, data processing, and servicing software, with pre-built, optimized method templates that are customizable through drag-and-drop method creation and single calibration, all of which combines to provide operational simplicity, data quality, and productivity. With automated tuning, easy to create data acquisition methods, and streamlined data processing setup, the Orbitrap Exploris 240 MS delivers an intuitive user experience that enhances productivity for both new users and experienced instrument operators.

Built on our next-generation, unified software architecture, the Orbitrap Exploris 240 mass spectrometer delivers ease-of-use without sacrificing high performance. Hardware and software harmonization across the Thermo Scientific™ LC-MS portfolio simplifies learning and enables straightforward transfer of accessories and method parameters (Figure 1), streamlining the ability to go from sample to data to translate into scientific insights. In contrast to quadrupole time-of-flight (Q-TOF) instrumentation, the integrated instrument control, data processing, and servicing software allows LC-MS users of all skill levels to execute methods with ease, without compromising on data quality.

Thus, the Orbitrap Exploris 240 MS enables intelligent acquisition strategies while maintaining everyday usability.

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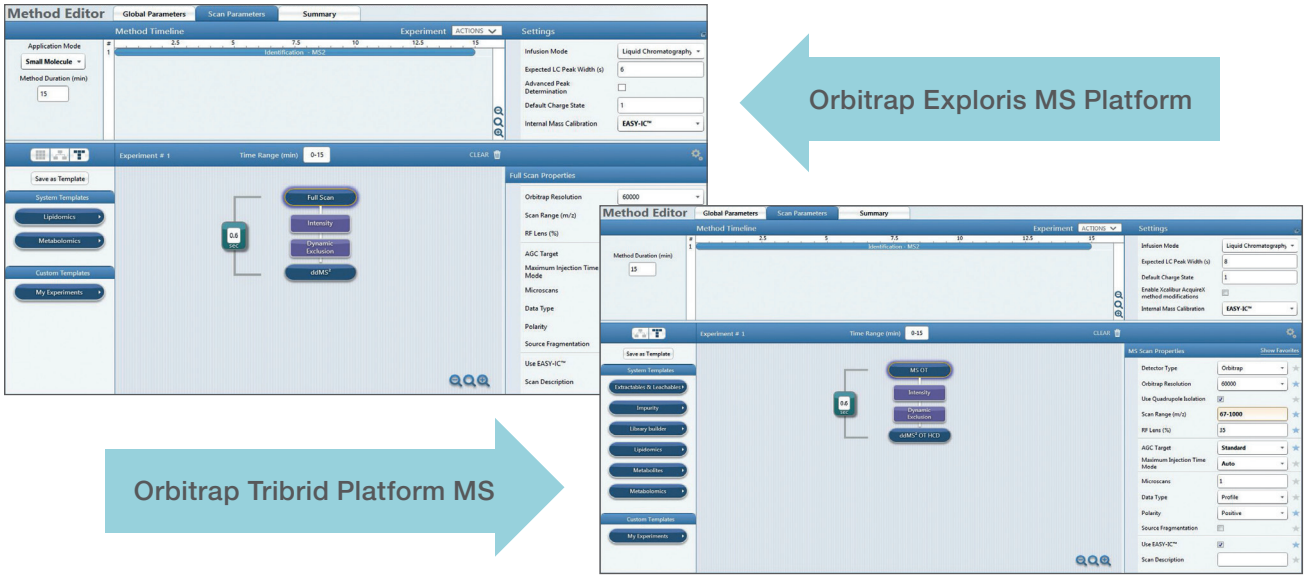

Figure 1. Harmonized next-generation user interface shared across instruments.

Best-in-class protein identification: When the science and the outcome is your end goal, the Orbitrap Exploris 240 MS with its intuitive method setup, delivers operational simplicity so you can spend time on what's important to you.

Method editor

The Instrument Control Software (ICSW) Method Editor on the Orbitrap Exploris 240 MS features several scan functions and filters, from simple to advanced applications (Figure 2). The Method Editor and Tune ecosystem deliver intuitive method programming with ready-to-go templates for the most popular experiments, such as metabolites, peptide ID, peptide quantitation, PTMs, TMT, and more.

Figure 2. Ease of use: Screenshot of the method editor window to setup the mass spectrometer parameters. Plug-and-play nodes enable you to easily set and customize the analysis to maximize data quality and instrument performance.

Optimized methods

Focus on your science, rather than experimental set-up, through ready-to-use application-specific method templates for common experiments. Method development can be eliminated or significantly reduced using these templates.

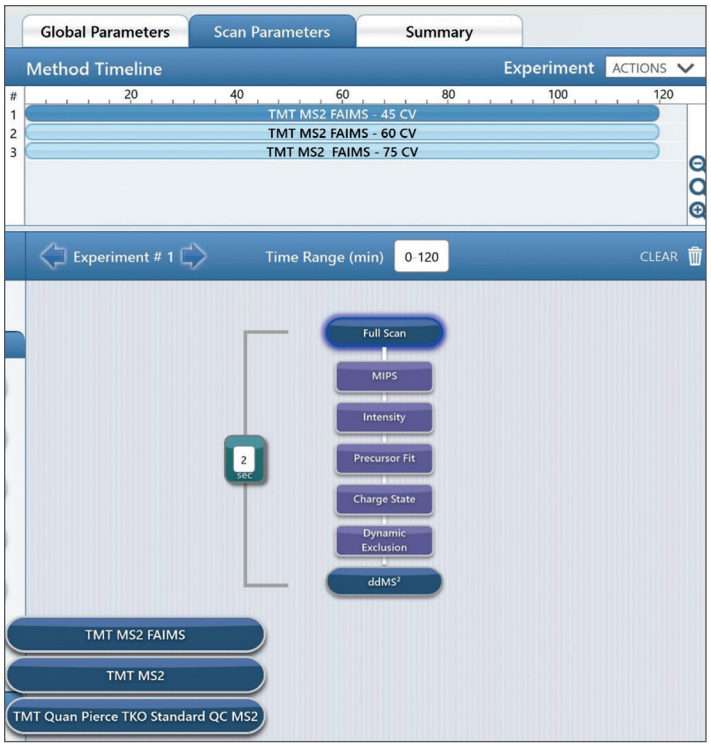

Figure 3. Within the ICSW method editor, application nodes for small-molecule or peptide analysis display pre-built, optimized method templates that are customizable through drag-and-drop method creation. Shown here is the pre-built method template for TMT multiplexing with the Thermo Scientific™ FAIMS Pro™ interface using three compensation voltages (CV), (-45, -60, and -75).

One-click calibration

The Orbitrap Exploris 240 MS ICSW is built with a similar look, feel, and function as the Thermo Scientific™ Tribrid™ and triple quadrupole mass spectrometers. This enables simplified calibration and diagnosis routines (Figure 4 and 5), while minimizing training among lab members.

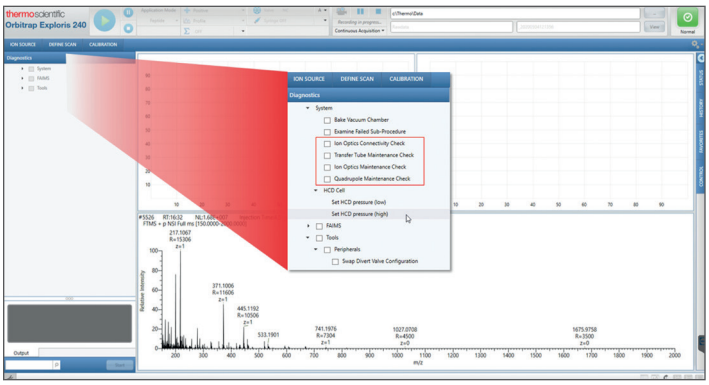

Figure 4. Maintenance checks simplify user experience and decrease preparation time.

Combined with Thermo Scientific™ Pierce™ FlexMix™ Calibration Solution, the Orbitrap Exploris 240 MS allows one-click calibration for mass and system tuning.

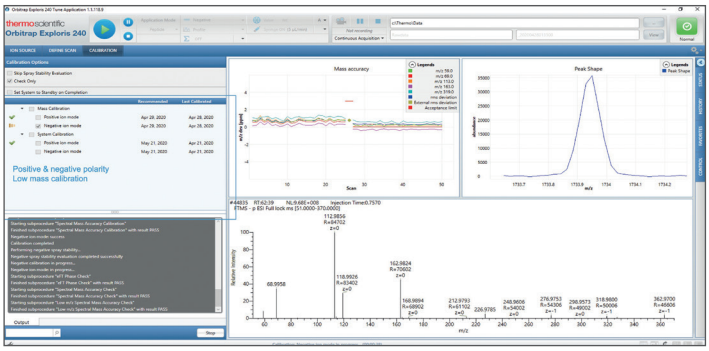

Figure 5. The Orbitrap Exploris 240 MS allows one-click calibration for positive and negative polarity.

Highlight

- The Orbitrap Exploris 240 MS instrument control software provides easy to create methods using an intuitive drag-n-drop interface (Figure 1 and 2).
- Within the ICSW method editor, pre-built, optimized method templates are ready to use in 2 clicks and are customizable to retain flexibility for your experimental conditions (Figure 3).
- Single-click instrument calibrations and maintenance checks simplify user experience and decrease preparation time, to spend more time analyzing sample of interest. (Figures 4 and 5).

Outlook

The Orbitap Exploris 240 MS is designed for ease-of-use with the versatility to tackle many applications, accessible to all, with no compromise in performance and data quality. With a high level of usability, this means that researchers can focus on their science and not instrument setup and analysis.

Conclusion

The Orbitap Exploris 240 MS is built on next-generation software architecture. The new method editor and instrument control software increases ease-of-use, making the mass spectrometer easier to operate for all levels of expertise while achieving robust, certain, and confident results necessary to answer novel biological questions.

Find out more at

thermofisher.com/OrbitrapExploris240Proof

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