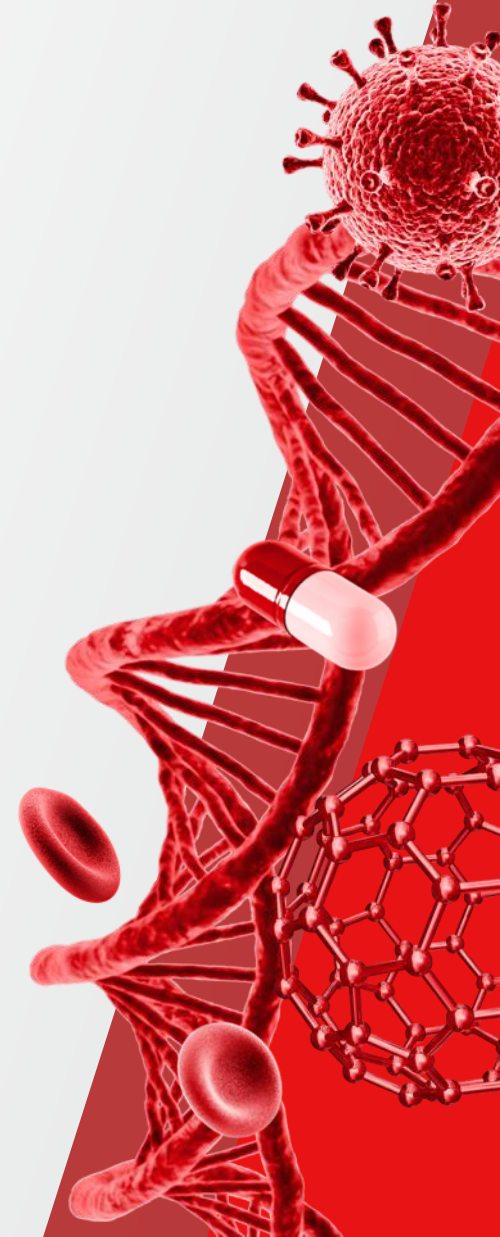


Thermo Scientific Orbitrap Hybrid 5.1 Instrument Control Software (OHS 5.1 ICSW) –

Overview - Updated With Defect Fixes in SP1

January 2026

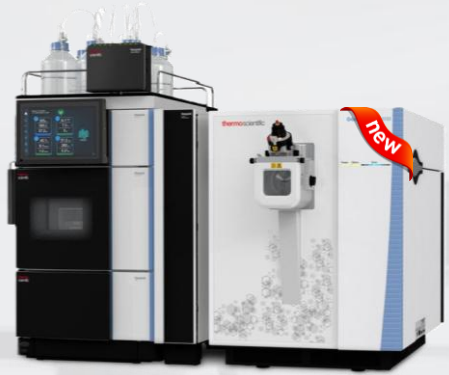
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Thermo Scientific Orbitrap Hybrid MS Portfolio – one ICSW



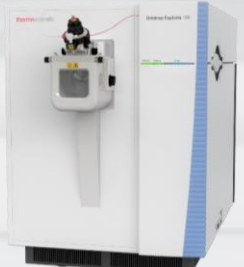
Thermo Scientific™ Orbitrap Excedion™ Pro Mass Spectrometer



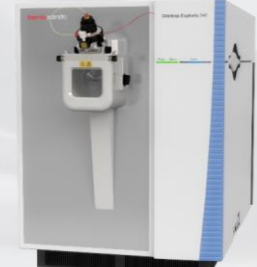
Thermo Scientific™ Orbitrap Exploris™ EFOX Mass Detector



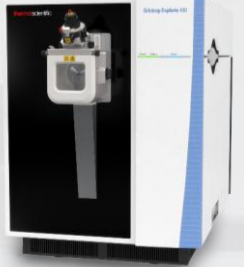
Thermo Scientific™ Orbitrap Exploris™ MX Mass Detector



Thermo Scientific™ Orbitrap Exploris™ 120 Mass Spectrometer



Thermo Scientific™ Orbitrap Exploris™ 240 Mass Spectrometer



Thermo Scientific™ Orbitrap Exploris™ 480 Mass Spectrometer



Thermo Scientific™ Orbitrap Exploris™ GC Mass Spectrometer



For Research Use Only. Not for use in diagnostic procedures.



Thermo Scientific™ Orbitrap Exploris™ GC 240 Mass Spectrometer

Comparison of Orbitrap Hybrid Portfolio



Orbitrap Exploris
240



Orbitrap Exploris 480




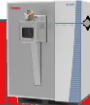



Orbitrap Excedion Pro

	Orbitrap Exploris 240	Orbitrap Exploris 480	Orbitrap Excedion Pro
Max Resolution (FWHM) @ m/z 200	240,000	480,000	480,000
Mass range	40 – 6,000 (8,000 *)		40 – 6,000 (12,000 *)
Precursor ion selection	≤ 2,500		
Sensitivity	S/N 250 @ 200 fg reserpine (tSIM)	S/N 150 @ 50 fg reserpine (tSIM)	IDL FullScan < 1.5 fg; tMS2 < 1,5 fg; tSIM < 0.8 fg
Maximum scan rate (Hz)	22Hz	40 Hz	70 Hz
Mass accuracy - external	< 3 ppm RMS drift over 24 hours		
Mass accuracy w/ EASY-IC - internal	< 1 ppm over 5 days		
Spectral multiplexing	20		
Polarity switching: one cycle equals (pos./switch/neg./switch)	60 k Full Scan < 700 ms (equals > 1.4 Hz) 60 k tSIM Scan < 600 ms (equals > 1.6 Hz)		
Calibration	One-click calibration with FlexMix and dedicated calibration probe - with harmonization and improved user experience across all TNG platforms (TSQs, Hybrids, Tribrids)		
One-Point Mass Calibration	One-Point (Self) Mass Calibration achieves < 3 ppm RMS drift over at least 4 weeks		
Scan modes	<ul style="list-style-type: none"> Full Scan ddMS2 (topN) Full Scan ddSIM tSIM (targeted mass list) ddMS2 Full Scan ddMS2 (targeted mass list) With options for <ul style="list-style-type: none"> 'Number of Scans' (= TopN) 'Cycle Time' multiple experiments can be created combining the above listed scan types 		<ul style="list-style-type: none"> ETD/EThcD fragmentation capability 3,750 Resolution setting Bent Trap Pre-Accumulation Enhanced Dynamic Range (eDR) Adaptive RT Hybrid DIA
Advanced acquisitions	AcquireX, APD, AcquireX AB		
	TMT @ 45k resolution setting	<ul style="list-style-type: none"> 16 msec transient (7,500 min resolution) System Templates supporting BoxCar and SureQuant approaches TurboTMT with TMT reagents up to 32-plex 	

* Biopharma Option or Biopharma Edition

Comparison of Orbitrap Exploris Family

	 Orbitrap Exploris EFOX	 Orbitrap Exploris MX	 Orbitrap Exploris 120	 Orbitrap Exploris 240	 Orbitrap Exploris 480
Max Resolution (FWHM) @ m/z 200	90,000	180,000	120,000	240,000	480,000
Mass range	40 – 1,500	40 – 3,000 (8,000 *)	40 – 3,000	40 – 6,000 (8,000 *)	
Precursor ion selection	n/a	n/a	≤ 2,500		
Sensitivity	S/N 250 @ 200 fg reserpine (tSIM)			S/N 150 @ 50 fg reserpine (tSIM)	
Maximum scan rate (Hz)	22 Hz (Full Scan)	22 Hz (Full Scan)	22 Hz		40 Hz
Mass accuracy - external	< 3 ppm RMS drift over 24 hours				
Mass accuracy w/ EASY-IC - internal	< 1 ppm over 5 days				
Spectral multiplexing	n/a	n/a	20		
Polarity switching: one cycle equals (pos./switch/neg./switch)	60 k Full Scan < 700 ms (equals > 1.4 Hz)	60 k Full Scan < 700 ms (equals > 1.4 Hz)	60 k Full Scan < 700 ms (equals > 1.4 Hz) 60 k tSIM Scan < 600 ms (equals > 1.6 Hz)		
Calibration	One-click calibration with FlexMix and dedicated calibration probe - with harmonization and improved user experience across all TNG platforms (TSQs, Hybrids, Tribrids)				
One-Point Mass Calibration	One-Point (Self) Mass Calibration achieves < 3 ppm RMS drift over at least 4 weeks				
Scan modes	<ul style="list-style-type: none"> Full Scan multiple experiments can be created combining various Full Scan experiments 	<ul style="list-style-type: none"> Full Scan multiple experiments can be created combining various Full Scan experiments 	<ul style="list-style-type: none"> Full Scan ddMS2 (Top1-4) tSIM (targeted mass list) ddMS2 (Top1-4) Full Scan ddMS2 (targeted list) (Top1-4) up to 5 experiments in timeline 	<ul style="list-style-type: none"> Full Scan ddMS2 (topN) Full Scan ddSIM tSIM (targeted mass list) ddMS2 Full Scan ddMS2 (targeted mass list) With options for <ul style="list-style-type: none"> 'Number of Scans' (= TopN) 'Cycle Time' multiple experiments can be created combining the above listed scan types 	
Advanced acquisitions		APD	AcquireX (chargeable option)	AcquireX, APD, AcquireX AB TMT @ 45k resolution setting	<ul style="list-style-type: none"> 16 msec transient (7,500 min resolution) System Templates supporting BoxCar and SureQuant approaches TurboTMT with TMT reagents up to 32-plex

* Biopharma Option or Biopharma Edition

Resolved Issues in OHS 5.1 SP1 ICSW

- Sequence execution interrupted due to MS response timeout - full fix
- Sequence execution interrupted due to DAQ USB misalignment

Note: This fix makes "Pre-Accumulation for MS2 Scans" feature no longer usable in combination with FAIMS in an instrument method. This restriction will be mitigated in the next software release.

- Exploris GC: Quad Transmission Calibration triggers a software error
- Dynamic Time Scheduling based on Pierce PRTC Mixture not functional

List of New Features and Improvements in OHS 5.1 ICSW

New Features

General

- Tune and Method Editor support new Orbitrap Exploris EFOX mass detector

Improvements

General

- OptaMax Plus: Vaporizer Temperature of up to 650 °C for the OptaMax Plus is available

Method Editor

- Inject Filtering: The instrument allows wider inject filtering for reduced fragmentation of intact proteins
- Mild trapping available on Exploris MX in Application Mode Small Molecule

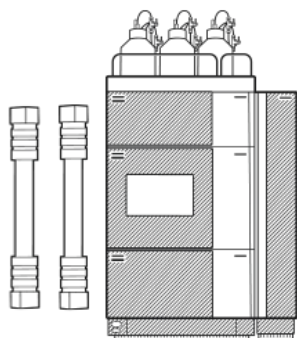
Sequence execution interrupted due to MS response time out is partially fixed. The fix reduces the frequency of sequence interruption but does not fully address it. An **OHS 5.1 SP1 is planned to fix this bug.**

New instrument: Orbitrap Exploris EFOX

The built for purpose LC-MS platform for Environmental and Food Safety Labs

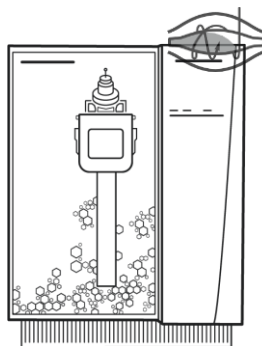
Standard EFOX hardware configuration

Vanquish Duo



- Enhancing Confidence
- Productivity Gains
- Method Flexibility

Orbitrap Exploris EFOX



- Making High Resolution MS Easy
- Unlimited target compounds
- Retrospective Analysis

Chromeleon CDS software



- A Dedicated User Interface
- Fast accurate data review
- Easy to learn, easy to train

Key Take Away

- Pre-configured methods and targeted workflows reduce setup and method development time.
- Accelerates turnaround time with streamlined operation and intelligent software integration.
- Confidence in Compliance - Generates HRAM data that meets global regulatory standards.
- Orbitrap Performance, Accessible to More Labs.



- Based on established Exploris Technology
- Dedicated and competitive price position
- Aimed at EFS customers and market
- EFS focused functionalities
 - Resolution: up to 90k
 - Mass Range: 40-1500 m/z
 - Full Scan Mode only

Inject filtering wide

Intact Protein mode only

Application Mode #
1

Intact Protein ▾

Method Duration (min)
60

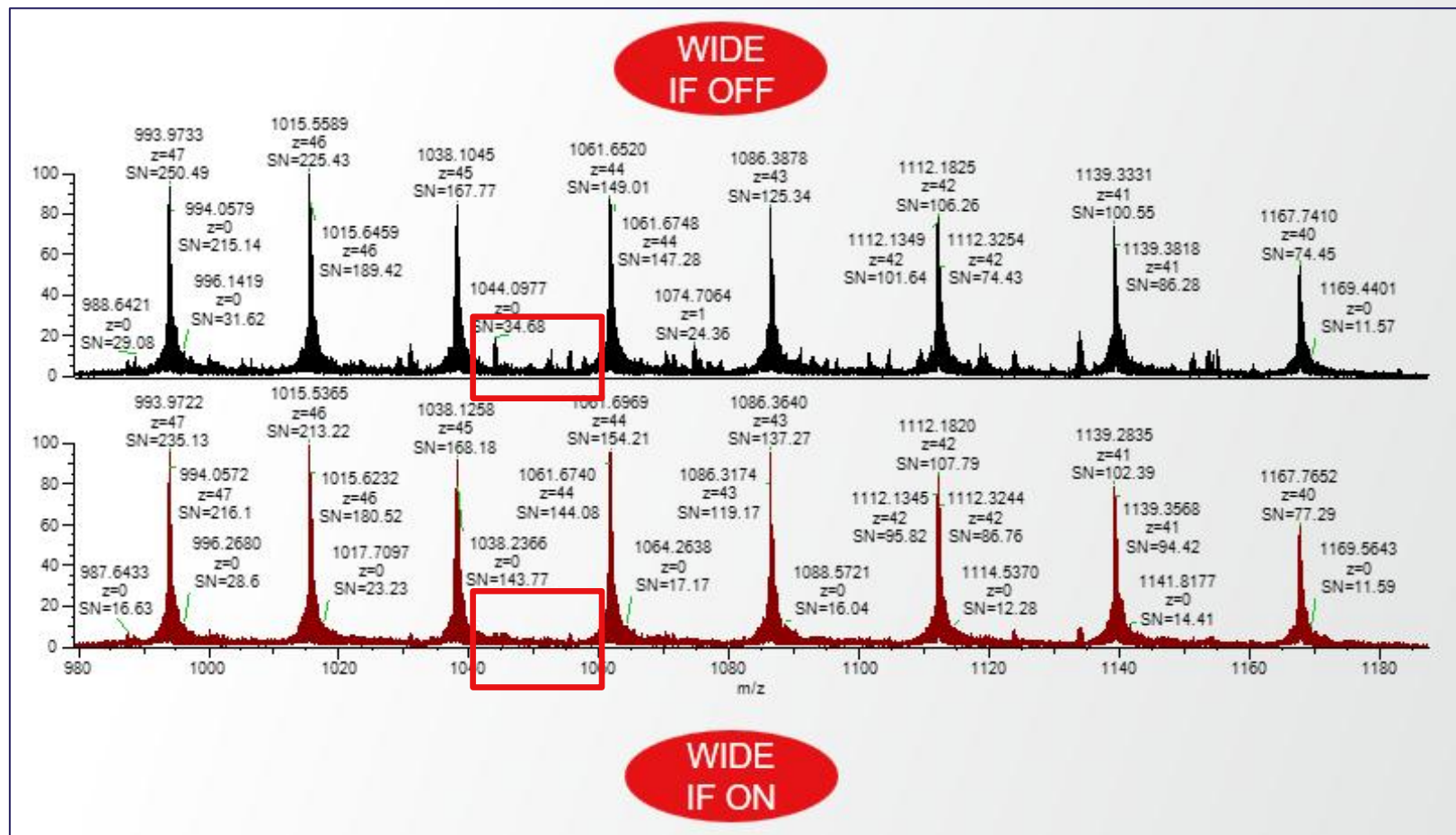
Data-Dependent MS² Scan Properties [Show Favo](#)

Multiplex Ions

Isolation Window (m/z) 2

Isolation Offset Off ▾

Inject Filtering Wide



➔ Fragmentation can be reduced

Improvements

Optamax Plus – Vap Temp 650 °C

Ion Source Properties	
Ion Source Type	H-ESI
Spray Voltage	Static
Positive Ion (V)	3400
Negative Ion (V)	2300
Gas Mode	Static
Sheath Gas (Arb)	1
Aux Gas (Arb)	6
Sweep Gas (Arb)	0
Ion Transfer Tube Temp (°C)	320
Vaporizer Temp (°C)	0
Range: 0-650	Not in Use

- The ICSW now allows vaporizer temperatures up to 650 °C
- A better desolvatisation of some compounds could be shown

Mild trapping on OT Exploris MX

Method Editor	
Application Mode	# 1
Small Molecule	
Method Duration (min)	60

Settings	
Infusion Mode	Liquid Chromatography
Expected LC Peak Width (s)	6
Advanced Peak Determination	<input checked="" type="checkbox"/>
Mild Trapping	<input type="checkbox"/>
Lock Mass Correction	Off

- Mild trapping is now available also on OT Exploris MX
- It reduces unwanted (MS1) fragmentation in the back of the instrument (no influence on In-source fragmentation)
- Use for labile compounds that are susceptible to MS1 fragmentation

Release Notes

Thermo Scientific Orbitrap Hybrid Series 5.1 Instrument Control Software Release Notes

Version	Version No.	Orbitrap Hybrid Instrument Series							
Instrument family		Exploris				Exploris GC		Excedion	
Instrument model		480	240	120	MX	EFOX	GC	GC 240	Pro
1.0	1.077.7	✓	-	-	-	-	-	-	-
1.1	1.1.117.22	✓	-	-	-	-	-	-	-
1.1 SP1	1.1.117.26	✓	-	-	-	-	-	-	-
2.0	2.0.182.18	✓	✓	✓	-	-	-	-	-
2.0 SP1	2.0.182.25	✓	✓	✓	-	-	-	-	-
2.0 SP2	2.0.182.35	✓	✓	✓	-	-	-	-	-
3.0	3.0.261.13	✓	✓	✓	-	-	✓	✓	-
3.1	3.1.279.9	✓	✓	✓	-	-	✓	✓	-
4.0	4.0.309.27	✓	✓	✓	✓	-	✓	✓	-
4.0 SP1	4.0.309.28	✓	✓	✓	✓	-	✓	✓	-
4.1	4.1.335.19	✓	✓	✓	✓	-	✓	✓	-
4.2	4.2.362.16	✓	✓	✓	✓	-	✓	✓	-
4.2 SP1	4.2.362.21	✓	✓	✓	✓	-	✓	✓	-
4.2 SP2	4.2.362.26	✓	✓	✓	✓	-	✓	✓	-
4.2 SP3	4.2.362.36	✓	✓	✓	✓	-	✓	✓	-
4.2 SP4	4.2.362.42	✓	✓	✓	✓	-	✓	✓	-
4.3	4.3.458.15	✓	✓	✓	✓	-	✓	✓	-
4.4	4.4.550.18	✓	✓	✓	✓	-	✓	✓	-
5.0	5.0.694.11	✓	✓	✓	✓	-	✓	✓	✓
5.1	5.1.761.11	✓	✓	✓	✓	✓	✓	✓	✓
5.1 SP1	5.1.761.17	✓	✓	✓	✓	✓	✓	✓	✓



System Requirements

Thermo Scientific Orbitrap Hybrid Series 5.1 SP1 Instrument Control Software Release Notes

Installation notes

This section describes the supported target systems and the system requirements.

Supported target systems

- Thermo Scientific Orbitrap Exploris™ 120 mass spectrometer
- Thermo Scientific Orbitrap Exploris 240 mass spectrometer
- Thermo Scientific Orbitrap Exploris 480 mass spectrometer
- Thermo Scientific Orbitrap Exploris MX mass detector
- Thermo Scientific Orbitrap Exploris EFOX mass detector
- Thermo Scientific Orbitrap Exploris GC mass spectrometer
- Thermo Scientific Orbitrap Exploris GC 240 mass spectrometer
- Thermo Scientific Orbitrap Excedion™ Pro mass spectrometer

System requirements

The minimum hardware and software configurations required for Orbitrap Hybrid Series 5.1 SP1 Instrument Control Software operation are as follows:

System	Requirements
PC	3.0 GHz Quad Core Intel™ Processor 32 GB RAM 512 GB SSD Hard Drive Display Monitor Resolution of 1920 × 1080 Two Network Interface Cards (NIC), 1000 MBit/s
Software	<ul style="list-style-type: none"> • Microsoft™ Windows™ 10 Enterprise 2016 LTSC, 2019 LTSC or 2021 LTSC; Thermo Scientific™ Xcalibur™ 4.7 SP1 • Microsoft™ Windows™ 11 Enterprise 2024 LTSC, Thermo Scientific™ Xcalibur™ 4.8

TIP: The Orbitrap Hybrid Series 5.1 Instrument Control Software was only tested within the delivered composition.

Support for Chromeleon™. The Chromeleon driver compatibility matrix reflects the tested compatibility for combinations of Orbitrap Exploris Series instrument control software versions, Chromeleon software versions, and instrument models. For more information and to view the compatibility matrix, sign on to support.thermoinformatics.com/downloads/default.aspx, and then select **Chromeleon > Chromeleon > Related Drivers > Driver Compatibility Matrix**.

Note:

Xcalibur 4.7 SP1 software applies Foundation 3.1 SP9 and Xcalibur 4.8 applies Foundation 3.1 SP11.

Source: [Release Notes for OHS 5.1 SP1 ICSW](#)

Software Release

Flexera

Orbitrap Hybrid series 5.1 is available to customers using Flexera software distribution site.

Customers new to the Flexera site should use the following link:

<https://thermo.flexnetoperations.com/control/thmo/RegisterMemberToAccount>

After setting up an account, customers can access the site using the following link:

<https://thermo.flexnetoperations.com/control/thmo/login>

In the 'Product List' page, find 'Instrument – Orbitrap Hybrid Series" and identify Hybrid series 5.1 in the subfolder

Product Download

Orbitrap Hybrid Series 5.1

[Download Help](#)

The software you are about to download is subject to export control laws and regulations. By downloading this software, you agree that you will not knowingly, without prior written authorization from the competent government authorities, export or reexport - directly or indirectly - any software downloaded from this website to any prohibited destination, end-user, or end-use.

2 Files

+ File Description	File Size	File Name
+ HybridSeries5.1	2.3 GB	HybridSeries5.1.iso
+ HybridSeriesWorkstation5.1	1.4 GB	HybridSeriesWorkstation5.1.iso

Manuals and Help files

Manuals and Help files will be stored in the document portal as well as installed on the local instrument PC - <https://docs.thermofisher.com/>

The screenshot shows a web browser window displaying the ThermoFisher Chromatography and Mass Spectrometry Help Portal. The browser's address bar shows the URL <https://docs.thermofisher.com>. The page header includes the ThermoFisher Scientific logo and the text "Chromatography and Mass Spectrometry Help Portal" with a "Sign In" link. The main content area features a dark blue banner with the text "Find technical documentation for Chromatography and Mass Spectrometry products". Below the banner is a search bar with a language dropdown set to "English" and a search input field. Underneath the search bar are five category tiles: "Chromatography" (with a chromatography column icon), "Mass Spectrometry" (with a mass spectrometer icon), "Elemental Spectrometry" (with an elemental spectrometer icon), "Desktop Software" (with a software box icon), and "Ardia Platform" (with a red Ardia logo icon). At the bottom center of the page is a button labeled "Show all documentation".

Manuals and Help files

- Sign in – in the upper right-hand corner
- Thermo Employees – Use Single Sign on
- Customers – Use your Thermo Fisher log in information or create a log in

ThermoFisher SCIENTIFIC Chromatography and Mass Spectrometry Help Portal

Find technical documentation for Chromatography and Mass Spectrometry products

English Search

Sign In

Chromatography Mass Spectrometry Elemental Spectrometry Desktop Software Ardia Platform

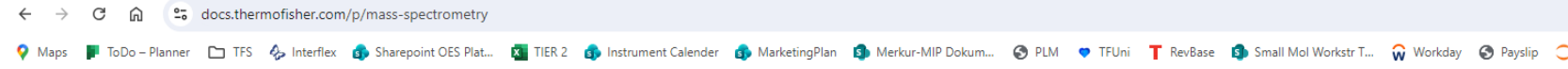
Show all documentation

Sign In

Customers

Employees (Single Sign-on)

Manuals and Help files



Spectrometry



Home / Spectrometry

Mass Spectrometry

LC-MS (Orbitrap Astral, Orbitrap Hybrid Series, Orbitrap Tribrid, Exactive, Stellar, ISQ, TSQ, LTQ, Accessories)

LC-MS | [Show all documents](#)

Stellar MS	Orbitrap Astral Series	Orbitrap Tribrid Series	Orbitrap Hybrid Series
ISQ Series	TSQ Series	LTQ Series	LTQ FT Series
Exactive Series	Accessories		

Navigate to
“Orbitrap Hybrid Series”

A screenshot of a search results page. On the left is a sidebar with a 'Search type' section (Document titles only) and a 'Product Tree' section. The 'Product Tree' is expanded to 'Spectrometry' > 'Mass Spectrometry' > 'LC-MS Mass Spectrometers' > 'Orbitrap Hybrid Series'. The main content area shows search results for 'CIS Settings for Improved Security (End Users)' and 'Configuring the Data System for the Orbitrap Exploris Series Mass Spectrometers Installation Guide'. Each result includes a document icon, title, and a 'Download PDF' link.

Manuals and Help files

The screenshot shows the ThermoFisher Scientific 'Chromatography and Mass Spectrometry Help Portal'. On the left, there are filters for 'Orbitrap Exploris Series' and 'Mass Spectrometry'. The main content area displays search results for 'Configuring the Data System for the Orbitrap Exploris Series Mass Spectrometers Installation Guide' and 'Orbitrap Exploris 120 Software Manual'. A red box highlights the 'Save search' button in the top right of the search results. A red arrow points from this button to the 'Save search result' dialog box on the right. The dialog box has options to 'Save as' a search or a collection, a 'Summary' section, an 'Enter a name' field, an 'Add a description' field, a 'Choose a color' section with a black circle selected, and an 'Activate alert' section with a checkbox checked. At the bottom of the dialog are 'Cancel' and 'Save' buttons.

ThermoFisher Scientific | Chromatography and Mass Spectrometry Help Portal

Refine your search: English Search

14 results | Sort by: Relevance Copy link Save search

ment is intended for IT professionals. Motivation The Center for Internet Security (cisecurity.org) offers various scripts to harden a computer system. The term "...

Configuring the Data System for the Orbitrap Exploris Series Mass Spectrometers Installation Guide [Download PDF](#)

Orbitrap Exploris 120 MS, Orbi... Installation Guide

Configuring the Data System for the Orbitrap Exploris Series Mass Spectrometry Configuring the Data System for the Orbitrap Exploris Series Mass Spectrometers Installation Guide BRE0035129 Revision A November 2022 Configuring the Data System for the Orbitrap Exploris Series Mass...

Orbitrap Exploris 120 Software Manual [Download PDF](#)

Orbitrap Exploris 120 MS User Guide

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Save search result

Save as

a search

a collection

Summary

Product Tree: Mass Spectrometry|LC-MS M... Language: en-US Sort: Relevance

Enter a name

Product Tree: *Mass Spectrometry|LC-MS Mass Spectrometers|Orbitrap Exploris Serie

Add a description

Choose a color

Activate alert

Receive emails if content matching search criteria is added or updated

Cancel Save

Saving Search and Activating Alerts

- Requires being logged in
- Will send email alert when new manuals are uploaded – New manuals are tied to new build release

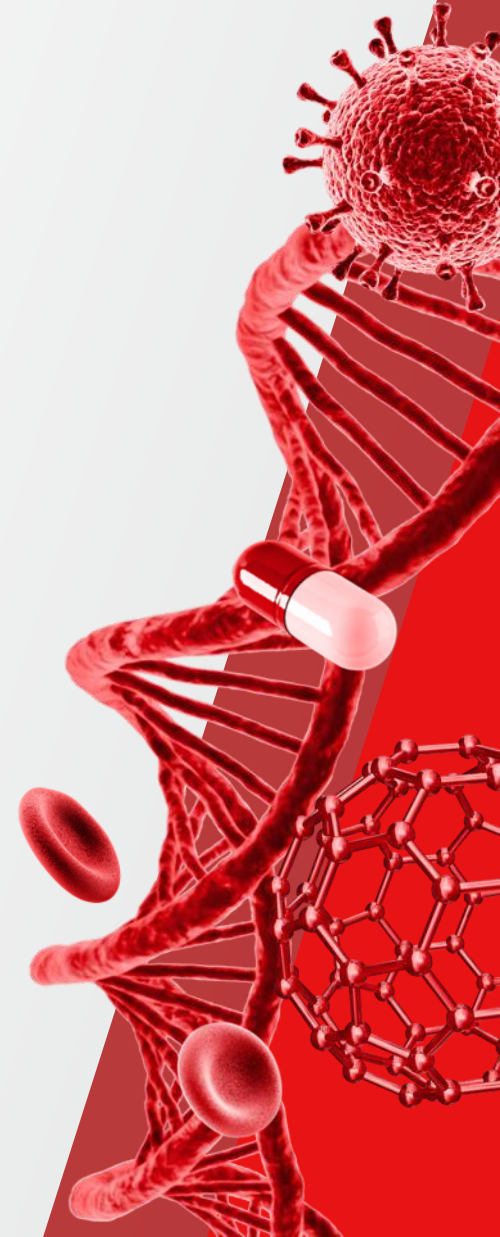
Updates to Manuals for Orbitrap Hybrid Series

Pre-Installation Requirements Guide

Operator Manuals

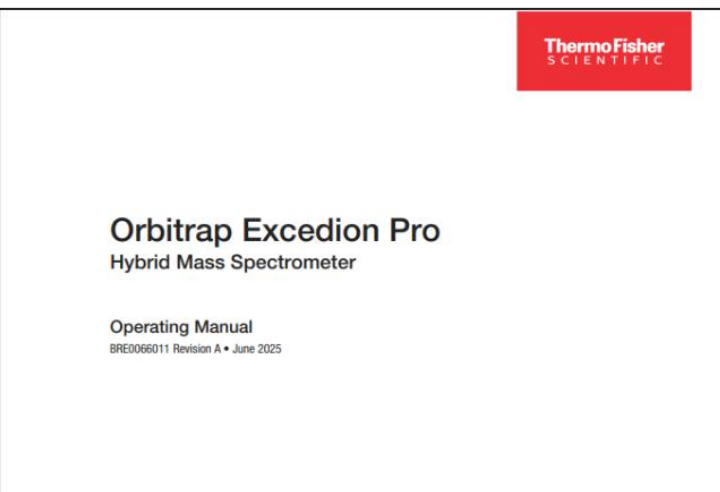
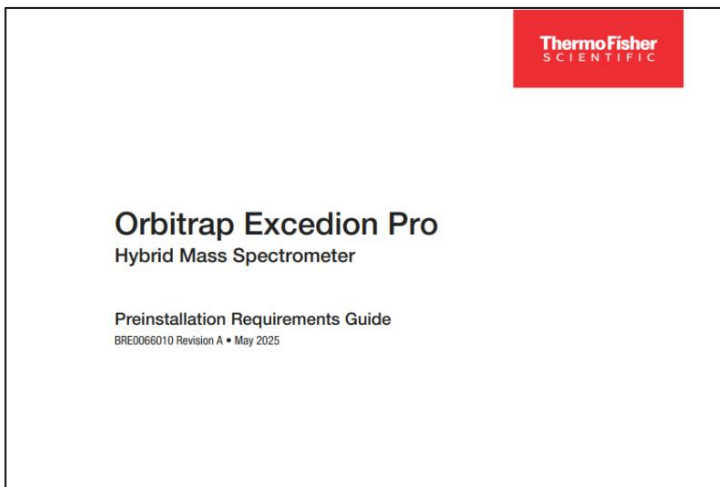
Model specific **Software Manuals** and **online help**

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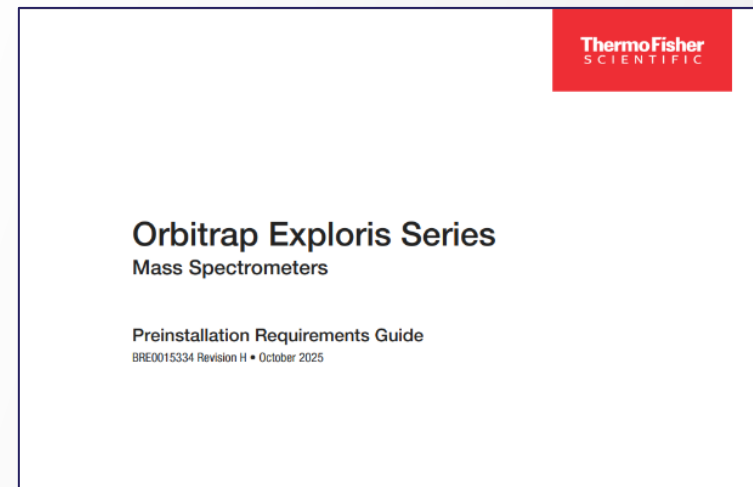


Pre-Installation Requirements Guide And Operating Manual for Hybrid series

Excedion Pro Hybrid Mass Spectrometer



Orbitrap Exploris Series



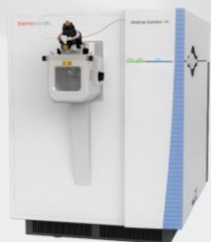
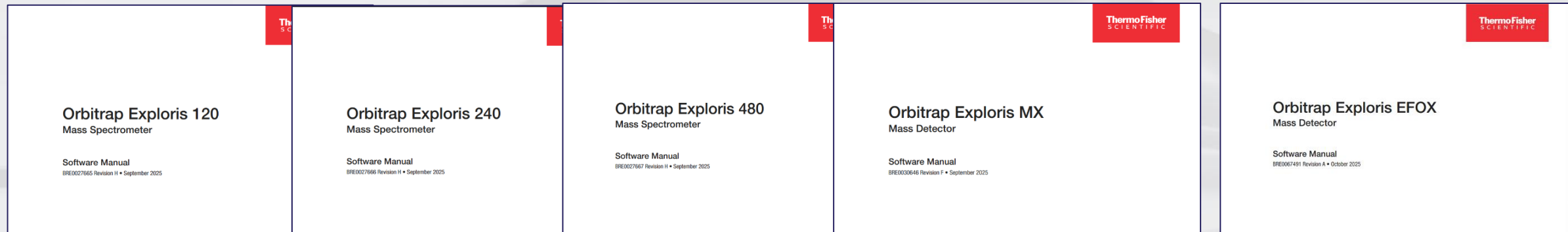
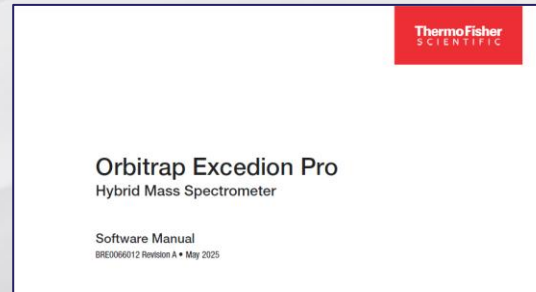
Pre-Installation
Requirements
Guide

Operating
Manual

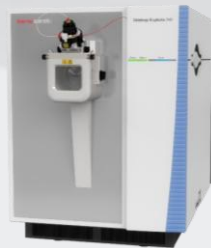
Software Manuals for these Orbitrap Hybrid models



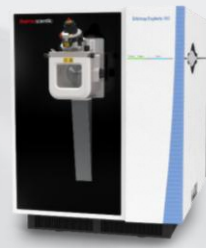
Thermo Scientific™ Orbitrap
Excedion™ Pro Mass
Spectrometer



Thermo Scientific™ Orbitrap
Exploris™ 120
Mass Spectrometer



Thermo Scientific™ Orbitrap
Exploris™ 240
Mass Spectrometer



Thermo Scientific™ Orbitrap
Exploris™ 480
Mass Spectrometer



Thermo Scientific™
Orbitrap Exploris™ MX
Mass Detector



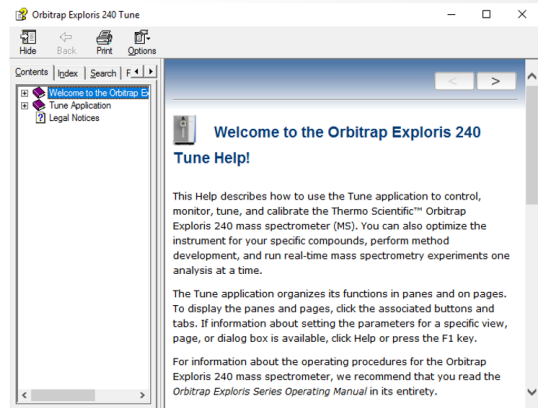
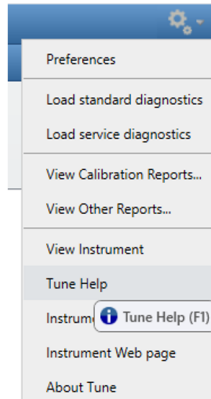
Thermo Scientific™
Orbitrap Exploris™ EFOX
Mass Detector

Updated Software Manuals and updated online help are part of the delivered ISO-Image and installed upon the installation of OHS 5.1 ICSW

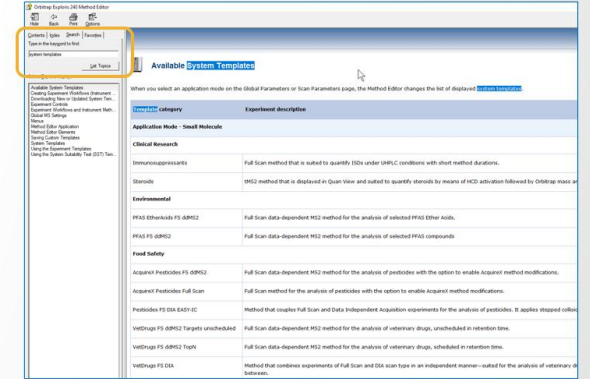
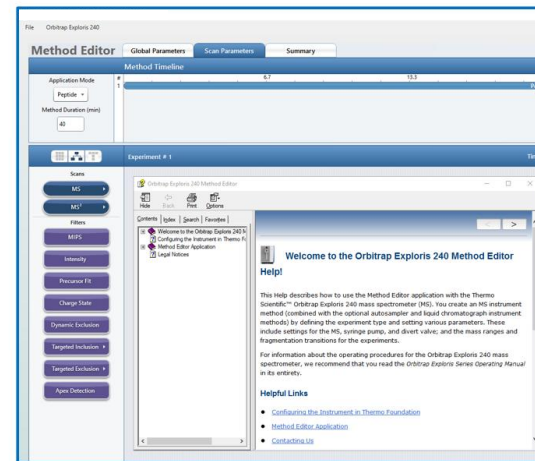
Display Online Help – of Tune – and – of Method Editor - via Fct F1 Key

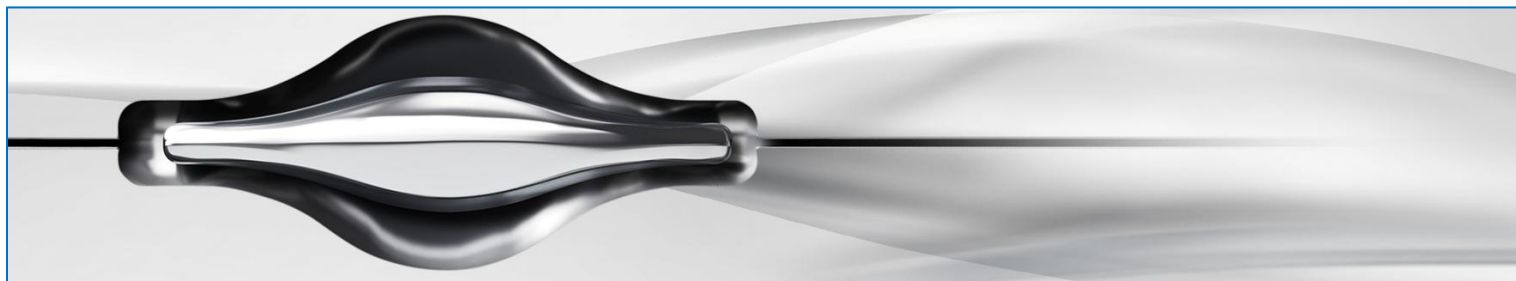
Display online help – of Tune - via Fct F1 key

or via the gear wheel symbol in Tune – located to the right (top) corner in Tune



Display online help – of Method Editor - via Fct F1 key

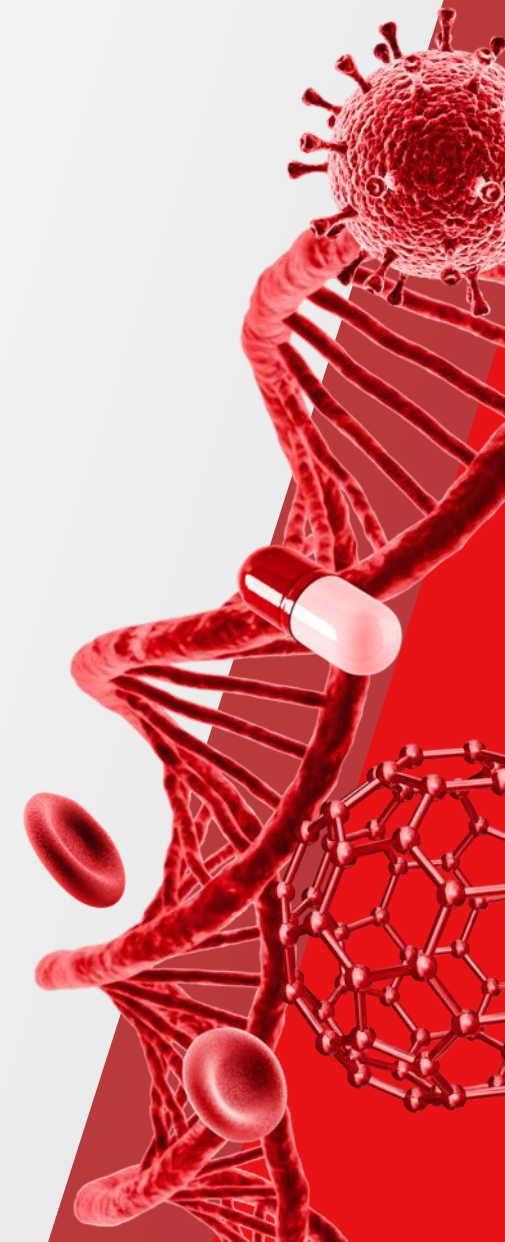




- Working under Chromeleon CDS * software

* CDS = Chromatography Data System

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OHS 5.1 ICSW and Chromeleon CDS Software

LC-MS data acquisition under Chromeleon

- The **Orbitrap Hybrid Series 5.1 Instrument Control Software** was only tested within the delivered composition. The Chromeleon driver compatibility matrix reflects the tested compatibility for combinations of Orbitrap Exploris Series instrument control software versions, Chromeleon software versions, and instrument models. For more information and to view the compatibility matrix, sign on to support.thermoinformatics.com/downloads/default.aspx, and then select Chromeleon > Chromeleon > Related Drivers > Driver Compatibility Matrix.
- Chromeleon also supports Windows 11 with the corresponding Foundation and OHS 5.1
 - Win11 Foundation 3.1SP11
 - Win10 Foundation 3.1SP10