

thermoscientific

Join the **mass** movement  
towards mass **spectrometry**



Thermo Scientific  
ISQ EC single quadrupole mass spectrometer

**ThermoFisher**  
SCIENTIFIC

# Embrace the power of **mass** spectrometry

Achieving a comprehensive understanding of the samples you analyze is always a challenge. At Thermo Fisher Scientific, we believe the easier we can make the journey from sample to knowledge, the more information you will have to succeed with your analyses.

Despite the benefits of incorporating mass spectrometry (MS) into your analyses, we know MS can seem complex. That is why we designed the Thermo Scientific™ ISQ™ EC single quadrupole mass spectrometer with ease of use in mind. The ISQ EC mass spectrometer not only seamlessly integrates with your ion chromatograph (IC) or liquid chromatograph (LC), but also sets new standards for user friendliness.

## Gain greater insights from your sample

Coupling ion or liquid chromatography to mass spectrometry (MS), allows you to gain greater insights from your samples. Adding MS gives you:

- Higher sensitivity and more accurate quantitation
- Chromatographic peak mass confirmation, reducing the likelihood of false negatives and positives



## Resolve complexity

Analyze simple and complex matrices with confidence based on the superior robustness of the ISQ EC mass spectrometer. This single quadrupole MS offers:

- Improved resolution of analytes in complex matrices
- Identification of co-eluting peaks

## Easily master MS

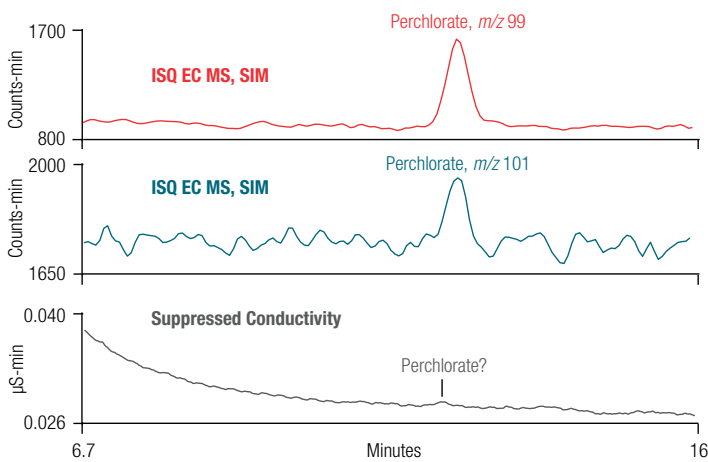
The seamless integration of the ISQ EC mass spectrometer with your IC or LC system allows you to focus on successfully using the system with:

- Integrated tools to help you quickly learn the MS system
- Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS) software for analysis, including embedded control of the ISQ EC mass spectrometer

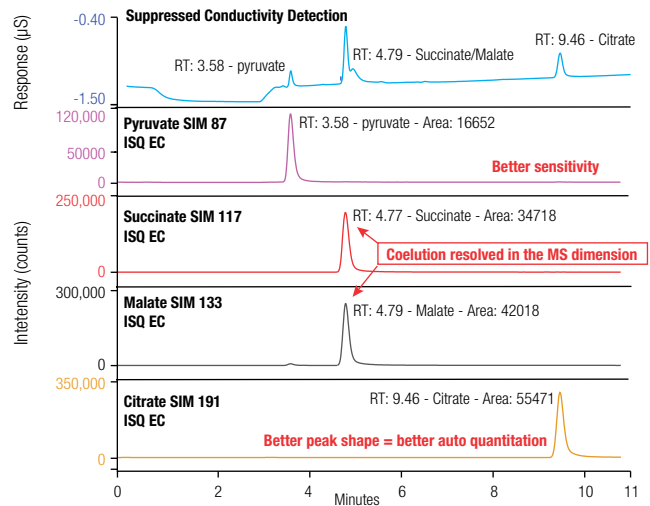
# Gain greater insights from your sample

The power of MS enhances your chromatography analyses with higher sensitivity and improved selectivity for analytes of interest. The ISQ EC MS achieves limits of detection (LOD) in the single-digit-parts-per-billion (ppb) range. For analyses requiring peak confirmation, the ISQ EC MS provides mass-to-charge ( $m/z$ ) confirmation for separated compounds to give you confidence in your results.

## Ion Chromatography – Mass Spectrometry (IC-MS)



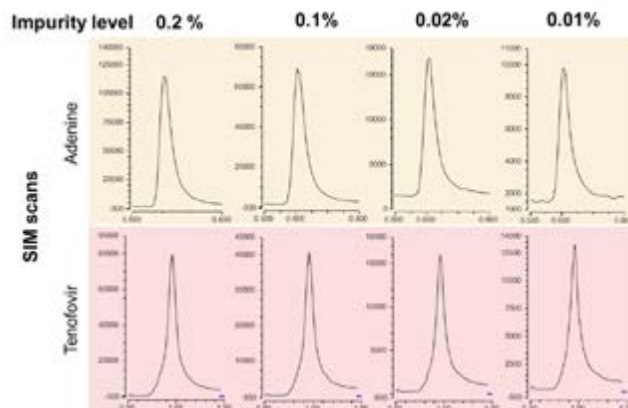
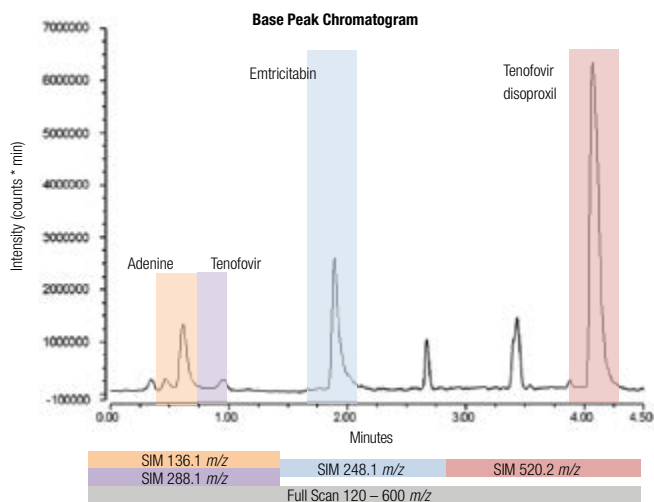
The ISQ EC mass spectrometer offers improved low-mass sensitivity for detecting perchlorate in municipal drinking water. This sensitivity is not possible using IC with conductivity detection (CD) alone. Additionally, no organic solvent make-up is required.



Compared to IC with conductivity detection alone, the ISQ EC MS provides better selectivity by resolving co-eluting peaks using mass-to-charge ( $m/z$ ) ratio. In this example, succinate ( $m/z$  117) and malate ( $m/z$  133) peaks are co-eluting in an animal feed sample. These peaks are resolved in single ion monitoring (SIM) mode.



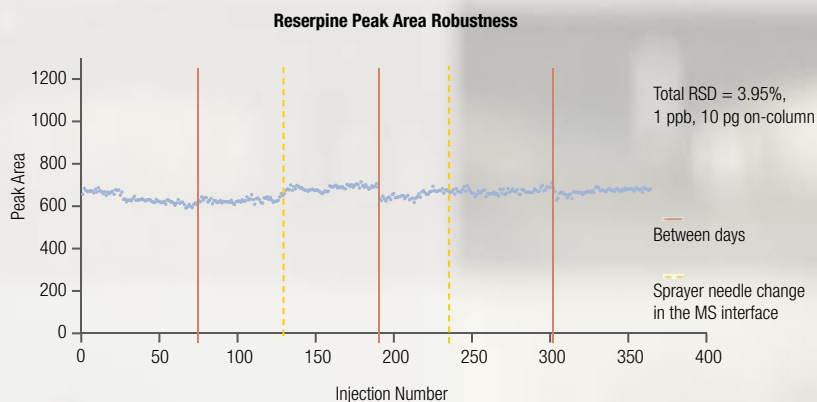
## Liquid Chromatography – Mass Spectrometry (LC-MS)



When detecting impurities for both routine and demanding pharmaceutical assays, MS provides reliable and robust quantification that complements traditional UV/Vis data. The ISQ EC MS can perform targeted and untargeted impurity profiling at the same time by employing Full Scan and SIM scans in the same run. This will ensure you do not miss a single peak.

# Resolve complexity

The ISQ EC mass spectrometer enables the analysis of a variety of complex sample matrices with unparalleled robustness.



The ISQ EC MS demonstrates reliable day-to-day, low-concentration reserpine peak area reproducibility, even while simultaneously performing routine maintenance.



The ISQ EC features an all new orthogonal ion source specifically designed to address challenging sample matrices. The ion source provides longer, uninterrupted operation by saving time spent on maintenance.

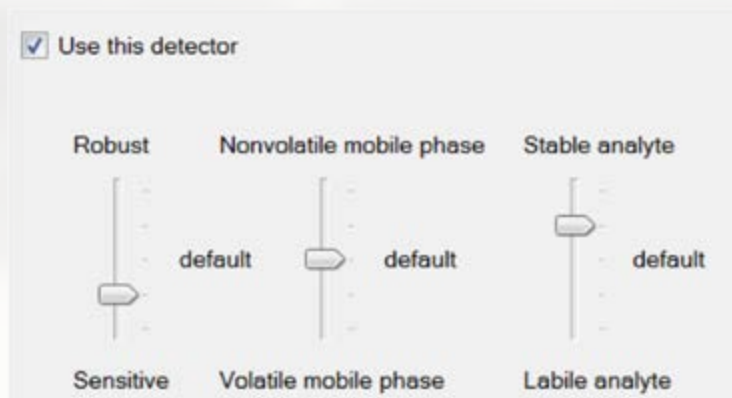


# Easily master MS

The faster you develop your MS skills, the closer you move to expanding your sample knowledge. With the ISQ EC mass spectrometer, both novice and advanced users can easily master MS.

## Master MS

Quickly access expert experiment-based knowledge built into the ISQ EC MS interface to obtain quality results fast. This interface was designed with unique algorithms and two modes. Easy Mode focuses your MS analysis using basic chemical parameters. Advanced Mode provides customizable parameters to enhance the quality of your results (e.g., sensitivity, peak confirmation, robustness).



The intuitive ion source technology tool, incorporated into Easy Mode, helps you select optimal MS conditions based on three parameters.

## Gain more time for data analysis

The first step to better understanding your sample is to analyze and report your IC-MS and/or LC-MS data.

The Chromeleon CDS software simplifies this process with embedded control of the ISQ EC MS system. The software is not only easy to use, but also regulatory compliant.

### In addition:

- Quickly access detailed method information from the Thermo Scientific™ AppsLab Library of Analytical Applications, an online repository
- The Thermo Scientific™ Chromeleon™ XPS Open Access user interface enhances your user experience with simple, walk-up workflows
- An Autotune feature automates instrument calibration. Moreover, the Autotune can be scheduled as part of your workflow, at any time and from any place

The workflow is shown in four steps:

- Step 1. Select your eWorkflow and instrument:** A screenshot of the Chromeleon CDS interface showing a list of workflows and instruments.
- Step 2. Create your sample list:** A screenshot showing a table with columns for 'Position' and 'Sample Name'. The table contains six rows of data.
- Step 3. Submit your sequence:** A screenshot of a 'Sequence Submitted' dialog box with the message 'Sequence has been submitted!'.
- Step 4. Get your custom analysis report, either printed or via email:** A screenshot of the 'Data' view in Chromeleon CDS, showing a table of analysis results.

# Your trusted MS partner

Thermo Fisher Scientific offers a comprehensive portfolio of mass spectrometry instruments to help you solve complex analytical challenges. Choose from our single quadrupole, triple quadrupole and high resolution accurate mass (HRAM) hybrid quadrupole-Orbitrap™ MS instruments. We also provide a single point of contact for application, technical and integrated lab service support. Let our expertise complement yours along the journey from sample to knowledge.



**Thermo Scientific™ Orbitrap Fusion™  
Tribrid™ Mass Spectrometer**



**Thermo Scientific™ Q Exactive™  
Hybrid Quadrupole-Orbitrap™  
Mass Spectrometer**



**Thermo Scientific™ TSQ Altis™  
Triple Quadrupole Mass Spectrometer**



**Thermo Scientific™ TSQ Quantis™  
Triple Quadrupole Mass Spectrometer**



**ISQ EC Single Quadrupole  
Mass Spectrometer**



Find out more at [thermofisher.com/ISQEC](https://www.thermofisher.com/ISQEC)

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