



Join the mass movement towards mass spectrometry



# Thermo Scientific ISQ EC Single Quadrupole Mass Spectrometer

## Benefits

- Exceptionally consistent response, even with challenging sample matrices
- Unique software translates physical properties of the analyte into optimal method parameters
- Built-in software productivity tools for both experts and those new to mass spectrometry
- Easy integration with high performance IC and LC chromatography systems

## Keywords

Mass Spectrometry, Single Quadrupole, IC-MS, LC-MS, Integriion, Vanquish

- The Thermo Scientific™ ISQ™ EC single quadrupole mass spectrometer seamlessly integrates with your ion chromatography (IC) or liquid chromatography (LC) systems. It is robust and easy to use, offering all chromatographers the opportunity to expand their expertise in running routine assays. Its advanced dual-role design provides exceptional low-molecular-weight performance for quantitation of ions using IC-MS in addition to reliable, everyday operation for routine LC-MS. The ISQ EC mass spectrometer offers:
- Durable atmospheric pressure ionization (API) source for use with the most challenging sample matrices and innovative vacuum interlock designed for reliable operation
  - High performing HESI-II electrospray to boost ionization efficiency and spray stability across a wide range of flow rates
  - Built-in reference standard for automated instrument calibration
  - Ultra-fast scanning supports simultaneous analyses of positive and negative ions
  - Easy method development and optimization using new ion source technology
  - Full integration with the Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS) software
  - Support for open-access LC-MS multi-user applications

Specification	ISQ EC Mass Spectrometer
Mass range ( <i>m/z</i> )	10 – 1250 with unit mass resolution
Ion source type	Heated Electrospray Ionization (HESI-II)
Source type	Atmospheric Pressure Ionization (API) featuring orthogonal spray design and adjustable source CID voltage
Source access and gas capabilities	Vacuum interlock to perform routine source maintenance without venting. Adjustable sheath, auxiliary, and sweep gas flow controls.
ESI max flow rate	2.0 mL/min
Supported modes	Full Scan, SIM and simultaneous Full Scan/SIM
Scan rate, max (Da/s)	Up to 20,000
SIM sensitivity HESI positive mode	10 pg Reserpine, 400:1 RMS <sup>1</sup> HESI-II at 400 µL/min Selected ion monitoring of <i>m/z</i> 609.3
SIM sensitivity HESI negative mode	20 pg <i>p</i> -Nitrophenol, 500:1 RMS <sup>1</sup> HESI-II at 400 µL/min Selected ion monitoring of <i>m/z</i> 138.1
Polarity switching	Yes, 25 ms
Mass accuracy	≤ ± 0.1 Da
Mass stability	Mass stability better than 0.1 Da over 48 hours with ΔT ≤ 2 K
Detector	DynaMax™ XR detection system, with off-axis dynode, discrete dynode electron multiplier and electrometer. Digital dynamic range ≥ 10 <sup>7</sup> .
Roughing pump	External, oil-based mechanical pump (up to 10 m <sup>3</sup> /h)
Operating conditions	Temperature Range: 15 °C to 35 °C (59 °F to 95 °F) Relative Humidity: 20 - 80% non-condensing
Power	100 – 240 VAC, 50/60 Hz
Dimensions in cm (height × width × depth)	52 × 42 × 91
Data system software	Thermo Scientific™ Chromeleon™ 7 Chromatography Data System software. Instrument control and data connection via Ethernet.
Weight	71 kg / 156 lbs.
Number of SIM scans / method	Unlimited
Number of SIM scans / sec	218
Nitrogen gas requirements	
Purity	≥ 99%
Input gas pressure (psig)	90 – 110
Flow demand (L/min)	Up to 30

<sup>1</sup> Reference specifications are typical performance specifications and not confirmed at install

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

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