SCIEX
The Power of Precision

SCIEX Triple Quad 4500 LC-MS/MS system

System specifications

The SCIEX Triple Quad 4500 system is a high sensitivity, bench top triple quadrupole mass spectrometer designed for LC-MS/MS analyses. This instrument provides excellent robustness and long term stability for the most demanding assays. The eQ electronics and proven Qurved LINAC collision cell provide unmatched support for fast chromatography applications with thousands of analytes.

System specifications		
Sensitivity MRM mode – positive ESI	Reserpine 1 pg on column	S/N > 300,000
Sensitivity MRM mode – negative ESI	Chloramphenicol 1 pg on column	S/N > 300,000
IDL - positive ESI	Reserpine 10 fg on column (609/195)	< 2.8 fg
IDL - negative ESI	Chloramphenicol 10 fg on column (321/153)	< 2.8 fg
Scan speed	12,000 Da/sec	
Polarity switching	50 msec, in MRM and Scheduled MRM (sMRM) modes	
Minimum MRM dwell time	1 msec	
MRM acquisition rate	500 MRM/sec	
Mass range (m/z)	5–2000	
Mass stability	0.1 Da over 24 hours	
Scan types	Full scan MS and selected ion for both Q1 and Q3, product ion scan, precursor ion scan, neutral loss or gain scan, multiple reaction monitoring (MRM), Scheduled MRM (sMRM)	
Detector type	AcQuRate pulse counting detector CEM	
Dynamic range	5 orders of magnitude	
Ionization source	Turbo V ion source housing with TurboIonSpray probe or APCI probe (max temp: 750°C) ESI flow rate range: 5 µL/min to 3 mL/min APCI flow rate range: 200 µL/min to 3 mL/min	
Optional sources	DuoSpray Turbo V ion source (combination ESI/APCI)	

Built-in devices	High-precision syringe pump and switching valve
Standard software	SCIEX OS software v3.0 or higher, 1 license for instrument control and 1 license for qualitative and quantitative processing for 1 PC Or Analyst software 1.6.1 or later, contains technical controls for 21 CFR Part 11 compliance; includes Scheduled MRM Pro algorithm
Available software upgrades, SCIEX OS v3.0 or higher	21 CFR part 11 Intact Quantification Scout triggered multiple reaction monitoring (stMRM) Central Administration Console (CAC)
StatusScope compatible	Real time monitoring and alerts of critical instrument parameters
Upgrade path	SCIEX Triple Quad 4500 system can be upgraded in the field to a QTRAP 4500 system

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Disclaimer:

S/N measurements are calculated based on 1 standard deviation of at least 3 points of noise which produce the smallest standard deviation, after applying up to 3 Gaussian smooths. S/N ratio does not imply the limit of detection (LOD) or limit of quantitation (LOQ) of the MS system or any assay; the S/N ratio presented only applies to the concentrations specified and cannot be extrapolated to any other concentrations.

These specifications are not standard installation specifications for the SCIEX Triple Quad 4500 system. The Triple Quad 4500 System is tested and installed in accordance with standard performance tests as described in the SCIEX Triple Quad 4500 and 4500MD series of instruments installation checklist and data log (GEN-IDV-06-1212).

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