

EVOLUTION
Triple Quadrupole
GC-MS/MS
System

Data Sheet



Triple Quadrupole GC-MS/MS System

The CHROMTECH EVOLUTION GC-MS/MS system is built upon the most popular GC-MS system, the AGILENT 5973/5975 series MSD.

It offers both outstanding performance and ruggedness due to the inert MSD ion source, true hyperbolic quadrupole design as well as a highly sensitive detector with HED.

Completed by our proprietary lonRail collision cell and another high-precision quadrupole Q3, the AGILENT MSD is easily upgraded to a true state-of-the-art triple quadrupole GC-MS/MS system.

Using Single Reaction Monitoring (SRM) is the most sensitive and selective technique to quantitate low levels of target compounds in the presence of complex matrices.

Typical application areas are multi-pesticide methods, doping analysis, forensic science, etc.

EVOLUTION GC-MS/MS Specifications

Mode (standard) E

Mode (optional) PCI and NCI

Ion source type Noncoated inert El source for

turbomolecular pump systems (optional for

diffusion pump systems)

Stainless steel El source for diffusion pump

system

Ion source temperature 106-350°C

Filaments Dual filaments for El

Maximum mass 800 u

Resolution 0.4 to 5 Da

Scan rate (electronic) up to 6250 u/s

MRM speed 200 transitions/250 ms

Minimum MRM dwell I ms

Mass filters Q1: Agilent proprietary monolithic

hyperbolic gold-coated quadrupole, Q3: Ultra-high precision quadrupole

Collision cell 90° square quadrupole patented

IonRail; low pressure design

Collision cell gas Argon, manual CID gas pressure regulator

(Nitrogen and/or EPC control optional)

Collision Energy (eV) up to 65

Detector Triple-Axis HED-EM with extended-life EM

Tuning Autotune, Quick Tune and TuneEvaluation

Pumping system 65 L/s diffusion pump, 70 L/s or 262 L/s

turbomolecular pump with 2.5 m³/h

mechanical pump

Acquisition control Agilent MSD Chemstation

Data Analysis and reporting Agilent MSD Chemstation,

Agilent MassHunter Data Analysis

Simultaneous MS and GC Can collect 2 GC detector signals while

acquiring MS data

Gas Chromatograph (6850, 6890N, 7820A or 7890A GC)

For more specifications on GCs refer to the GCs data sheet

For more information

For more information on our products and services, visit our website at www.chromtech.de

Injector Split/splitless (standard), PTV and others available

Autosampler CombiPAL, GC PAL, 7683, 7693, or G1888A (and more)

Oven temperature Ambient +4 °C - 450 °C (6890/7890A) or +5 °C - 350 °C

(6850), 8°C above ambient to 425°C (7820A)

Oven ramps/plateaus 7820A: 5; 6850 and 6890: 6/7; 7890A: 20/21.

Negative ramps are allowed.

Electronic pneumatic control

(EPC)

Auto pressure regulation for split/splitless, septum

purge

Carrier gas control modes Constant pressure and flow modes; pressure and

flow programmable

Pneumatic splitter Capillary Flow Technology devices for effluent

splitting, backflushing and column switching

Installation Checkout Specifications

El MS/MS sensitivity Injection of 100 fg of octafluoronaphthalene (OFN)

will produce a >750:1 RMS S/N for the transition of

m/z 272 to the fragment ion at m/z 222 using autotune parameters (Diffusion pump systems: Ipg OFN will produce a >500: I RMS S/N)

El scan sensitivity I pg OFN scanning from 90-300 u will give at

nominal m/z 272 ion >300:1 S/N

(Diffusion pump systems: Ipg OFN will produce a >200:1 S/N)

PCI scan sensitivity 100 pg BZP will give at nominal m/z 183 ion

>100:1 S/N (using methane) (Diffusion pump systems: n/a)

NCI scan sensitivity 200 fg OFN will give at nominal m/z 272 ion

>500:1 S/N (using methane) (Diffusion pump systems: n/a)

Physical Requirements

Dimensions (Triple Quad MS) 30 cm (w) x 71,5 cm (d) x 41 cm (h, front); 80 cm (h, back)

Additional space should be added for the data system and printer.

Weight (Triple Quad MS) 70 kg or 154 pounds

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CHROMTECH GmbH, 2011

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