compact LC-MS System

Product Description
Part Number: # 82633344

ESI- Quadrupole Time-of-Flight Mass Spectrometer System

Easy-to-use, instant expertise™ electrospray ionization quadrupole time-of-flight LC/MS/MS mass spectrometer designed for exact mass and true isotopic measurements in both MS and MS/MS mode.

Bench-top, small footprint Mass Spectrometer system for exact mass and highest mass resolution at U-HPLC speed in both MS and MS/MS mode:

- Unique FSR technology with Full Sensitivity @ Maximum Resolution achieved without any time constraints, in MS and MS/MS mode
- Outstanding Mass Resolution and Accuracy in both MS and MS/MS
- High-resolution extracted ion chromatograms capabilities
- High performance hyperbolic quadrupole and collision cell for compound fragmentation
- True Isotopic Measurements

A. Apollo II (ESI) Source

- Highly sensitive ESI Source with proprietary dual ion funnel guide for gentle mass independent ion focusing and high ion transmission efficiency
- Combined Funnel-Octopole-Cartridge with front access for easy maintenance
- Grounded needle for safety and easy sample introduction
- Suitable for U-HPLC, HPLC and CE coupling
- Heated counter current drying gas for gentle and efficient drying
- Ion lens system including in Source collision induced dissociation control (IS-CID)
- Pneumatic off-axis nebulization for flow rates up to 1 ml/min., with gradients from 100% aqueous to 100% organic
- Flow rate 1µl/min to 1ml/min
- Ni-Cr coated glass capillary for physical and electrostatic isolation
- Computer controlled HV and gas controller

B. High Mass Quadrupole Mass Filter:

- Hyperbolic quadrupole mass filter
- Ultra stable monolithic design
- RF-generator for monoisotopic precursor ion selection

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C. Novel high-transmission CID Collision cell:

- Hyperbolic quadrupole broad-mass bandwidth design
- Fast radial ion ejection enabling fast MS/MS cycle
- RF-Generator with fast amplitude switching
- Collision gas controller

D. Orthogonal pulsed ion extraction and Time-of-Flight Mass Analyzer

- Interface housing and ion lens system
- In-line detector system for easy maintenance
- Ultra-stable high voltage switches with up to 20 kHz repetition rate and appropriate power supplies.
- TOF analyzer with orthogonal mounted ion source
- In-flight refocusing optics for uncompromised sensitivity
- Single stage ion reflectron with increased mass resolution and accuracy
- Ultrafast 5 GS/sec 10 bit digitizer
- High-sensitivity and fast ion detector system, mechanical adjustment in micrometer range
- Positive and negative ion modes
- Ultra-stable high voltage power supplies for TOF analyzer and detector

E. Vacuum system

- Analyzer vacuum housing
- Vacuum system with 5 differential pumping stages
- One roughing pump 28 m^3/h and turbo pumps for ESI source and TOF analyzer
- Vacuum measurement and pump control unit

F. Syringe pump

G. Modes of Operation

- TOF Mass ranges 20-40,000 m/z
- Internal calibration (MS and MS/MS)
- External calibration (MS and MS/MS)
- Exact mass measurements independent from sample concentration over a wide dynamic range without second sprayer.

H. High-resolution-performance and accurate mass features

- Patented ion funnel source
- One-shot acquisition mode, no tuning for mass range optima
- Enhanced low mass sensitivity
- Superior MS/MS sensitivity
- Ultra broad mass-bandwidth
- Long term and ultra stable mass axis stability in MS and MS/MS
- Exact mass independent from sample concentration charge state and collision energy
- Combined calibration for both MS and MS/MS
- Wide dynamic range for quantitation
- Advanced temperature compensated flight tube
- Positive / negative ion operation

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I. Data system:

- PC Workstation with 3.5 GHz Single-CPU-Quad-Core-processor, 16 GB RAM, 2 TB hard disk, Ethernet connection for external networks
- R/W DVD-ROM drive DL
- ≥ 24" flat screen colour monitor
- Windows™ 7/64 operating system
- Laser printer
- Remote Service capability via 128-bit SSL-security web connection

J. Applications software

Software package Compass 2.0 for HPLC and MS control, data acquisition, post processing, and data analysis:

- Released Windows 7/64
- Compass / HyStar 4.1 for integrated control of most popular U-HPLC and HPLC systems and auto samplers and automation
- Expert mode: extended control over instrument parameters for interactive system optimization of sophisticated exact mass methods
- Compass / Data Analysis software DA 4.4, including:
    - Advanced data processing with a high degree of automation
    - SmartFormula 3D™: Automated sum formula determination using MS and MS/MS data with both, accurate mass and isotopic fit.
    - QuantAnalysis™ quantitation package
    - LibrarySearch ™ module for search of MS, MS/MS and MSn spectra with advanced matching algorithm
    - Charge deconvolution module
    - Export of spectra and ion current profiles as Windows metafiles to word-processing programs
- SW License Compass 2.0
- SW License Charge Deconvolution for DA 4.4
- SW License MaxEntropy Deconvolution as an option

K. Set of manuals and reference CD-ROMs

L. Installation

M. Familiarization upon installation

N. 1 year warranty

O. Training course - for 2 participants.

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