

**DEPARTMENT OF MEDICINAL CHEMISTRY
MASS SPECTROMETRY CENTER - INSTRUMENTATION**

Waters Micromass Quattro Micro API: Tandem Quadrupole Mass Spectrometer (QH)MS/MS

Manufacturer: Waters Corporation, Milford, MA, USA [A]
Mass range: 2000 Dalton (Primary & Secondary Beams)
Resolution: Unit mass (Q1 & Q2)
Interface: Micromass Zspray™ Atmospheric Pressure Ionization (API) Source
Ionization (±eV): Electrospray & Atmospheric Pressure chemical Ionization (ESI & APCI)
Ion Detection: Daly detector after Q2
Inlet Systems:
 Liquid Chromatograph (LC):
 Shimadzu LC-10AD Pumps (2) with
 SPD-10AV UV-Vis Variable Detector
 (Shimadzu Scientific Instruments, Inc., Columbia, MD) [B]
 Split: Variable
 Infusion: Harvard Apparatus Model 22 Syringe infusion pump
 (Harvard Apparatus, Inc., South Natick, MA) [F]
 Loop/Flow Injection Analysis (FIA)
 LC solvent delivery (10 - 1000µl min.⁻¹) with sample injection
 Sampling System:
 Shimadzu SIL-10ADVP Auto injector
 (Shimadzu Scientific Instruments, Inc., Columbia, MD)
 Rheodyne 8125 or 7125 Manual Injectors
 (Rheodyne Inc., Cotati, CA- now part of IDEX Health & Science Grp) [C]
Data System (DS):
 Hardware: Lenovo Pentium 4, 1.86 GHz, 1Gbyte RAM
 Software: Microsoft Windows^{XP}
 Micromass MassLynx[®] 4.0, MaxEnt[®] & BioLynx[®]
Acquisition Date: 2008
Funding: Drug Metabolism, Transport and Pharmacogenomic Research (DMTRP) Fund [V]
Pharmacia, Inc. (Gift) [D]
Predominant Uses:
 Drug, metabolite & conjugate studies (qualitative & automated quantification);
 tandem MS analysis of non-volatile and thermally-labile complex biological extracts
 and biopolymers; intact protein purity and mass determination.