



# Agilent 220 Ion Trap Mass Spectrometer

## Data Sheet

### Overview

The Agilent 220 MS along with the Agilent 7890A GC provides flexibility, throughput and performance in an easy-to-use system.



**Agilent Technologies**

## **Agilent 220 MS Specifications**

### **Mass Analysis**

- Mass range: 10 to 650 Da; scan range is time programmable throughout the run
- Resolution: Unit mass resolution over the entire mass range
- Mass calibration stability: RF-only field is stable for weeks to several months at constant analyzer temperature and helium flow
- Scan rate: 5600 Da/s
- Maximum ionization time: 25 ms
- Selected Ion Storage (SIS): Stores up to five range of ions; ejects matrix, column bleed
- Analytical linear dynamic range:  $10^3$  to  $10^4$  (compound and method dependent)
- Filament assembly: Dual filament both in EI and CI
- Transfer line temperature: maximum 350 °C
- Manifold temperature: maximum 120 °C
- Analyzer temperature: maximum 250 °C
- Electrode surface: Chrome (standard)

### **Software**

- MS Workstation (MSWS) for acquisition, automation and qualitative and quantitative data review; simultaneous MS and GC data collection; can collect 2 GC detector signals while acquiring MS data; automatic MS file format conversion to MassHunter
- MassHunter for qualitative and quantitative data review

### **Vacuum System**

- Turbomolecular pump: V-81 pump, air cooled, and thermostatically protected; 81 L/s capacity

### **Foreline Pump**

- DS-42, dual stage, rotary vane
- Voltage: 120, 230 V
- Pumping speed greater than 38 L/min ( $2.3 \text{ m}^3/\text{hr}$ )
- Oil mist eliminator (optional)

### **Optional MS Features**

- MS/MS and  $\text{MS}^n$ : CID using frequency modulated resonant or non-resonant energy modes; Full scan product ion spectrum
- Positive Chemical Ionization (PCI): Clean, low pressure PCI compatible with gas or liquid reagents; kit for single liquid or gas reagent included; optimized EI/CI switch within the same analytical run
- SilChrom electrodes: Silica-coated electrodes for maximum chromatographic inertness

## Optional Software

- EnviroPro for general and EPA specific report requirements
- ToxPro Plus includes three-ion ratio reports for toxicology applications
- MultiCompound for general extended reporting
- Access control and audit trail software for 21 CFR Part 11 compliance
- Spectral databases: National Institute of Standards and Technology (NIST), Wiley and Maurer Pflieger Weber (MPW) libraries are available

## Performance Specifications

### Scan rate at 5600 Da/s

Mode	Test standard	S/N
El full scan	1 pg octafluoronaphthalene	50:1
Cl full scan	5 pg benzophenone	20:1

## Power Requirements

- 100–130 Vac, 60 Hz  $\pm$  3 Hz, 12 A, 1.5 kW
- 200–260 Vac, 50 Hz  $\pm$  3 Hz, 6 A, 1.5 kW

## Environmental Requirements

- Temperature: 15 °C to 30 °C
- Humidity: 20% to 80% relative humidity (without condensation)

## Gas Chromatograph (Agilent 7890A GC System)

For more specifications on GCs refer to the GC Data Sheet

Injector	Split/splitless, Multi-mode inlet, PTV
Autosampler	7693 ALS, CombiPAL, 7697A Headspace Sampler
Oven temperature	Ambient + 4 to 450 °C
Oven ramps/plateaus	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 for backflushing

## Weight and Dimensions

	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
<b>220 MS</b>	23	50.7	50	19	62	24	24	9
<b>DS 42 foreline pump*</b>	11	24.3	38	15	21	8	21	8
<b>7890A GC</b>	45	99	57	22	54	21	58	22.8

\*with optional oil mist eliminator

## For More Information

For more information on our products and services, visit our Web site at [www.agilent.com/chem](http://www.agilent.com/chem).

[www.agilent.com/chem](http://www.agilent.com/chem)

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc., 2011  
Printed in the USA  
March 14, 2011  
5990-7665EN



**Agilent Technologies**