

Description of Instrument: One (1) 5975 inert MSD/DS Performance Turbo EI Bundle or use with 7890A, 6890 & 6850 GC.
Includes G3172A MSD, ChemStation (Win XP), G1701EA SW, PC, LaserJet printer
1 Year SW Upgrade/Phone Assist (44W)
1 YR PC Repair Recovery Service (0TP)
Familiarization at Installation (441.)

One (1) Ion Gauge Controller for use w/5975 MSD

One (1) Wiley 8th with NIST 2008 MS library Includes 562K Spectra, 350K chemical structures,
and 356K CAS RNs. NIST MS search and AMDIS Programs included.

Installation (44K)

Agilent 7890A Series GC Custom.

Includes LAN interface, 7683 interface, 20-ramp oven programming, 6 heated zones, 2 analog out, keyboard
and display pressure setpoints to 0.001psi (0-99psi)

Capillary S/SI inlet with EPC-150 psi

Mass Spectrometer Detector Interface

Factory plumbing for quick installation

Cryogenic oven cooling with CO2 Installation (44K)

This instrument must meet the following specifications:

- Electronic Pneumatic Control (EPC) device that allows for automatic control and programming of gases that affect the instrument's detector and oven. This will allow the Agency to conserve on the use of gases and increase efficiency. The EPC device must be capable of controlling the pressure to 0.001psi.
- Virtual scan and selected ion monitoring provides the capability to additional sensitivity for target compound and qualitative identification of non-targeted compounds.
- High speed ion detection utilizing rapid switching from positive and negative ion modes during the sample analysis.
- Timing devices that pre-program the instrument allowing for unattended operation, which will save the Agency operating time and increase efficiency.
- Compatible data software systems that can readily be networked to the existing Agilent ChemStation. Software and linkages must be completely compatible to existing software for effective data management and storage. This provides the Agency with the mechanism to ensure the integrity of the data produced, which are used in decision making processes such as civil and criminal enforcement actions.
- Compatible link to bridge this piece of equipment to existing Agilent instrumentation.
- The Mass Spectrometer Triple-Axis HED-EM Detector, which places the HED-EM doubly off-axis from the axis of the transmission quadrupole. This design increases sensitivity because it allows ion collection to be maximized (increased signal) and neutral noise to be reduced below off-axis detector designs.

- The Mass Spectrometer Gain Normalized Autotune which optimizes the EM's gain to ensures the optimal balance between ion count, linearity and EM life expectancy. Gain Normalization provides consistent sensitivity during the aging of the EM and consistent ion counts between multiple GC/MSD systems.
- Helium (He)Electron Impact Sensitivity SCAN mode, which provides 1 pg OFN gives > 400:1S/N scanning from 50-300 u Sensitivity is critical to meeting and/or exceeding analysis requirements especially for low detection level. For scan sensitivity S/N measurement the scan range must be reflective of normal operation parameters (50-300 u meets that criterion, ranges less than 150 u in size are NOT realistic).
- Monolithic quartz structure, hyperbolic form quadrupole with rods having a true hyperbolic shape in keeping with quadrupole theory. The Quadrupole is to be is independently heated and its temperature is to be user-selectable from 100-200C. The quadrupole mass filter is the heart of the instrument. Individual rods can become mis-aligned and are less reliable data. Quartz provides excellent thermal stability and exceptional thermal expansion properties. True hyperbolic shaped quadrupoles ensure lower field errors and provide the best possible ion transmission while maintaining resolution across the full mass range. Independent temperature control keeps the system clean and stable, and reduces thermal variation of the quadrupole. Heating to 200C allows robust operation and bake out.