Specifications for George Mason University’s Shared Research Instrumentation Facility’s GC-MS system located in Room 221, Discovery Hall, Prince William Campus. For further information see http://www.gmu.edu/departments/SRIF or write to the SRIF Lab Manager, Tom Huff at thuff@gmu.edu.

**Gas Chromatograph-Mass Spectrometer System #1**

**Instrument Uses**

The Agilent Technologies 5890 Series II gas chromatograph with mass selective detection determines the presence and concentrations of target solutes in the following applications:
- semi-volatile organic compounds
- dilute organic sample extracts
- environmental trace analysis (parts per billion)
- library identification of unknown compounds via mass spectral interpretation

**Instrument Specifications**

*Manufacturer:* Agilent Technologies Life Sciences/Chemical Analysis (Palo Alto, CA).

http://www.chem.agilent.com/

**Gas chromatograph**
- 5890 Series II gas chromatograph programmable oven
- split-splitless injector port
- on-column injector port
- configured for 0.25 mm id capillary columns
- automated liquid sampler holds 100 2-mL 12x32 mm vials
- CO2 cryo-cooling system

**Detection**
- 5971a mass selective detector
  - electron impact ionization
  - quadropole ion filter
  - ion-source vacuum gauge
  - maximum m/z of 625 amu
- flame ionization detector

**Data system**
- MS Chemstation
- EnviroQuant
- NIST 57k Library of spectra

For more background on this type of instrument, see the SRIF online GC-MS tutorial at http://www.gmu.edu/departments/SRIF/tutorial/gcd/gc-ms2.htm To see this instrument and learn what it can do, sign up for the SRIF seminar series held each semester on the Prince William Campus.