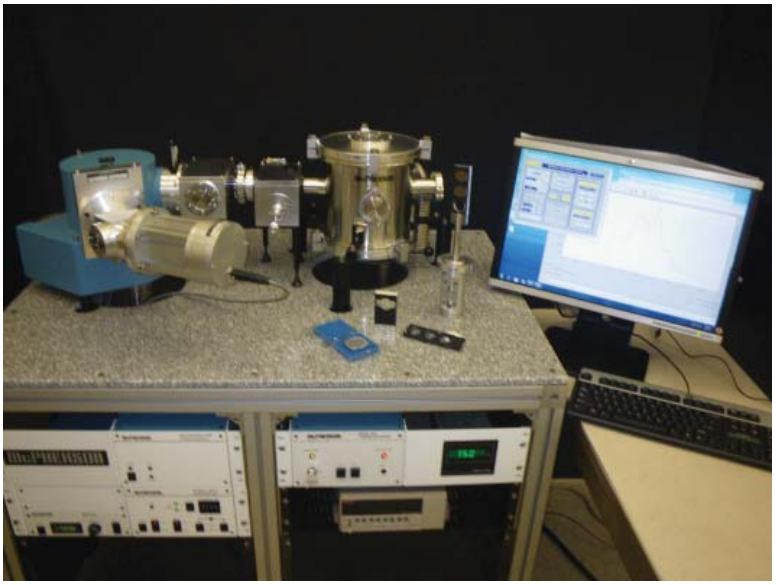
VACUUM *or* PURGED ULTRAVIOLET SPECTROPHOTOMETER

Do you test transmittance and reflectance in the Vacuum Ultraviolet? Do you provide optics, coatings, photo resist materials, substrates, etc. for use in the energetic vacuum region?

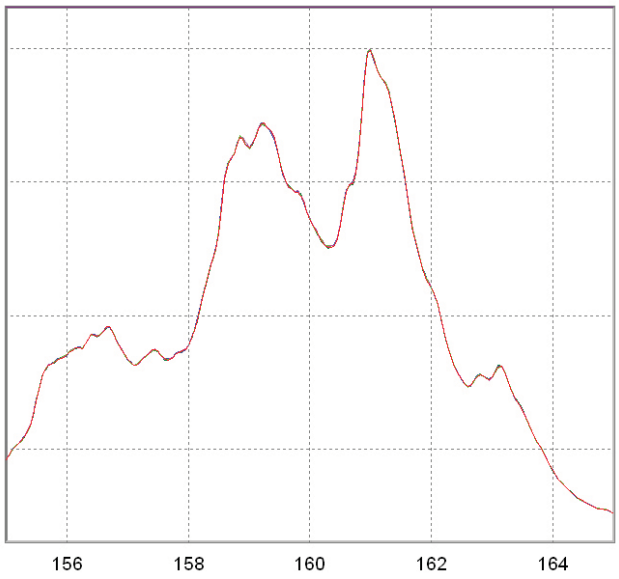
The VUVAS directly measures reflectance and transmittance properties of vacuum ultraviolet (VUV) optical components. The VUVAS system works from 120 to 380 nanometers with high throughput, strong signal levels and excellent reliability. The system uses a high throughput 0.2m focal length vacuum monochromator, focused Deuterium light source, a sample chamber capable of holding multiple samples, detectors, and an oil free vacuum pumping system.



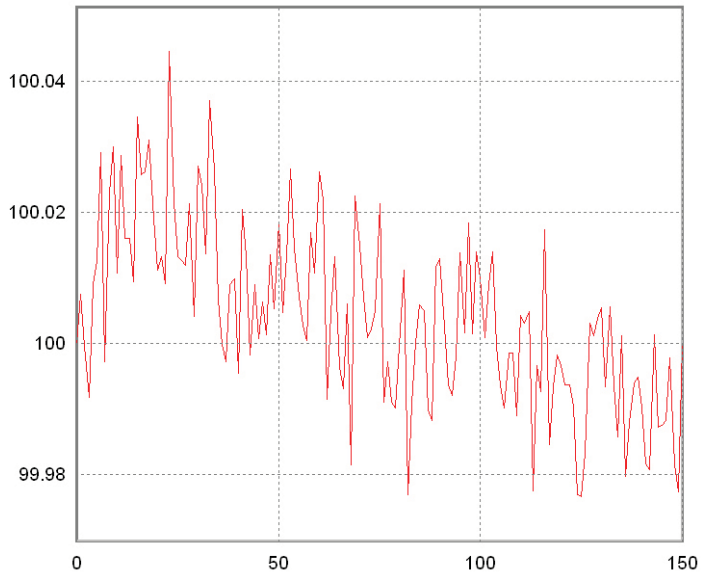
The VUVAS operates as a vacuum spectrophotometer in which the source output is scanned and stored. A second scan is made with the sample optical component in the light path. The ratio of the stored scan vs. measurement scan yields the optics reflectance or transmittance properties. Accurate measurement of optical properties can be made over a wide angle range, from near normal incidence to seventy degrees. Polarizer's have been developed and are available for the system.

The VUVaS comes complete with vacuum pumping or automatic purge-gas and gauge system. Easy to use Spectrometer Control Software (LabView™ based) controls automated parameters and signal recovery.

Reproducible, 6-scans shown below



Precise, <0.25%T at 157nm for 150 data points



McPHERSON

VUVAS 1000

Vacuum UV Analytical Spectrophotometer

VUVAS 1000 SPECIFICATIONS

Wavelength Range	120 to 350nm
Vacuum Compatible	10-5 torr
N2 Purge System	Optional
Precision, RSD (at 157nm)	0.25%
Precision, RSD (overall)	<0.5%
Stability (per hour)	<1%
Bandpass (adjustable)	1 to 8nm
Calibration accuracy	0.1nm
Wavelength reproducibility	0.05nm
Drive Step Size	0.00006nm
Measurement Beam	Collimated
Detector(s)	Scintillated R6095
Polarizer Mounting	Optional
Beam Scaling Iris	Optional

Detector position variable from ~10 to 180°
Sample position variable from zero to 60°

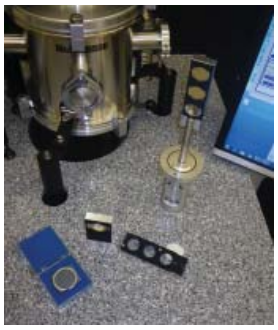
The standard sample holder accommodates up to three 25mm diameter x 6mm thick samples. Special sample holders are available, please inquire.

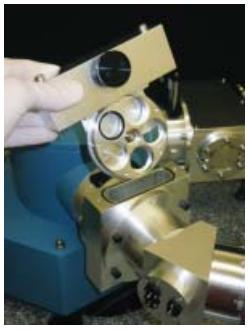
Computer optimized optical system with VUV enhanced coatings throughout.

VUVAS with vacuum or purge environment comes complete with 'one-touch' controls and gauges.

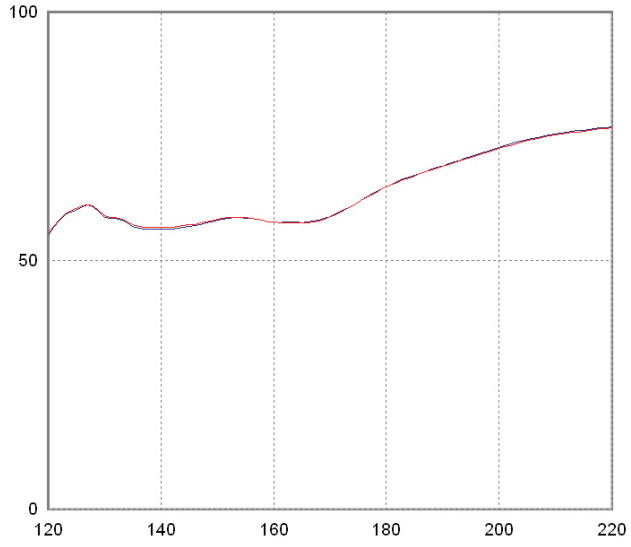
Easy to use Spectrometer Control Software sets scan and wavelength parameters and controls signal recovery. Graphic user interface updates data during scans. Data saved in ASCII or *.SPC format (native to Thermo GRAMS™ post processing software.) Data format is percent reflectance (or percent transmittance) vs. wavelength. Collecting data as raw voltage is also possible and requires post processing. Systems include PC for turnkey operation.

Contact McPherson today about your vacuum ultraviolet measurements.

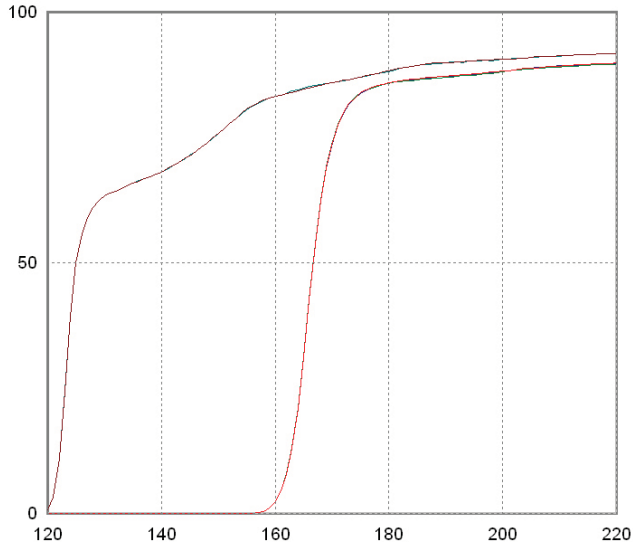




Reflectance of VUV Reflector



Transmittance of SiO_2 and CaF_2



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