Agilent 8453/4 UV-Vis (DAD) Spectrophotometer Specifications

The Agilent 8453 utilizes the Agilent UV Chemstation software. The general-purpose software is specially designed for ease of use in routine labs or for more complex analysis for advanced users

Tasks available with this instrument:

-Fixed Wavelength: Data at up to six wavelengths can be extracted from the spectrum
-Spectrum/ Peak: Finds up to specified number of peaks and/or valleys in spectrum
-Ratio/Equation: Allows the user to enter an equation for the evaluation of data
-Quantitation: Standards can be used for the calibration of UV-active compounds over a wide range

Modes available:

-Standard: Simple UV-Vis data collection
-Kinetics: Evaluate kinetic rates at a single wavelength. Rate calculations (zero order,first order) available
-Thermal Denaturation: Traces denaturation using a multi-step heating and cooling program (Peltier use)

Optical Specifications

Wavelength range	190–1100 nm
Slit width	1 nm
EP resolution test	>1.6 using the spectrum of a 0.02% v/v solution of toluene in hexane, ratio absorbance at 269 nm/266 nm
Stray light	<0.03% at 340 nm (NaNO2, ASTM) <0.05% at 220 nm (NaI, ASTM) <1% at 200 nm (KCl, EP)
Wavelength accuracy	<±0.5 nm (NIST 2034)* <±0.2 nm at 486.0 and 656.1 nm
Wavelength reproducibility	<±0.02 nm ten consecutive scans (NIST 2034)
Photometric accuracy	<±0.005 A at 1 A (NIST 930e) <±0.01A potassium dichromate, EP method
Photometric noise	<0.0002 A sixty 0.5-s scans at 0 A, 500 nm, rms
Photometric stability	<0.001 A/h at 0 A, 340 nm, after 1 h warmup, measured over 1 h, every 5 s, constant ambient temperature
Baseline flatness	<0.001 A 0.5-s blank, 0.5-s scan, rms
Typical scan time	1.5 s full range

Contact the TRACES Manager for full details.