

Ultrospec 4000 UV/Visible Spectrophotometer

The SWIFT II - QUANT Quantification module can be used for the determination of unknown concentrations in three ways:

- a) **Factor:** To produce results directly in concentration from a user entered factor.
- b) **Standard Curve:** To produce a plot of the absorbances of a series of standards from which the concentrations of samples of unknown concentration can be determined.
- c) **Substrate Concentration:** To enable the use of reagent test kits utilizing the principle of NAD / NADH dependent enzyme reactions.

Facilities include manual, linear regression, linear interpolation and spline curve fitting methods, up to 10 replicates of 20 standards, load by record identification with appending

of subsequent data to the file (useful for QC and clinical environments) and stored methods for protein quantification.

The audit trail, or automatic run log, enables a record of software manipulations carried out to obtain the experimental result to be written to a text file. In particular, it is a means of ensuring that data points are not edited to give, for example, a better straight line than was actually obtained during an analysis.

Computer Requirements

For optimum performance an IBM compatible 486 or greater personal computer running either Microsoft Windows 95 (or better) or Windows 3.1 (or better) is required. Any printer supported by either Microsoft Windows 95 or Windows 3.1 can be used to obtain hard copy of results. Contact your PC supplier for further information.

The Ultrospec 4000 is supplied complete with 8-position sample changer, GLP self-diagnostics, SWIFT II-METHOD software (Windows 95, 98 or NT), SWIFT-METHOD software (Windows 3.1), serial interface cable. Other accessories are available separately.

We supply support agreements which help you to fulfill the demands of regulatory guidelines concerning GLP/GMP.

- Calibration, certification using filters traceable to international standards
- Certificated engineers and calibrated test equipment
- Approved to ISO 9001 standard

Choice of agreement apart from break down coverage can include

- Preventive maintenance
- Certification

Specifications

Wavelength Range	190 to 1100 nm in 0.1 nm steps
Monochromator	1200 lines/mm concave holographic grating
Spectral Bandwidth	1.8 nm
Scan Speed	6200 nm/min survey scan at 1.0 nm steps
Wavelength Accuracy	±0.7 nm
Wavelength Reproducibility	±0.2 nm
Light Sources	Tungsten halogen and deuterium arc
Detector	Silicon photodiode
Photometric Range	-3.000 to +3.000A, 0.01 to 99999 concentration units, 0.1 to 200% T
Photometric Accuracy (Linearity)	±0.5% or ±0.003 A to 2.000 A at 546 nm, whichever is the greater
Photometric Reproducibility	Within 0.5% of absorbance value to 3.000 A at 546 nm
Stray Light	< 0.025% T at 220 nm using NaI < 0.025% T at 340 nm using NaNO ₂
Stability	±0.001 A/hr at 340 nm, near 0 A after warm up (tungsten lamp)
Noise	±0.001 A near 0 A at 546 nm ±0.002 A near 2 A at 546 nm
Baseline Flatness	±0.003 A
Digital Output	9 pin serial
Sample Compartment Size	140 x 220 x 80 mm (5.5 x 8.7 x 3.2 in)
Dimensions, H x W x D	190 x 500 x 360 x mm (7.5 x 19.7 x 14.2 in)
Weight	13 kg (28.7 lb)
Power Requirements	90 to 265 VAC, 50/60 Hz, 150 VA
Safety Certifications	CE 89/336/EEC (EMC directive); CE 73/23/EEC (LV directive); EN-61010-1 (IEC1010-1)

Catalog No.	Product
CGS 8158.39	Ultrospec 4000 UV/Visible Spectrophotometer
CGS 8159.39	Support Plinth
CGS 8160.39	Spare 8-Position Cell Changer