DS5

Dual Beam UV-Vis Spectrophotometer

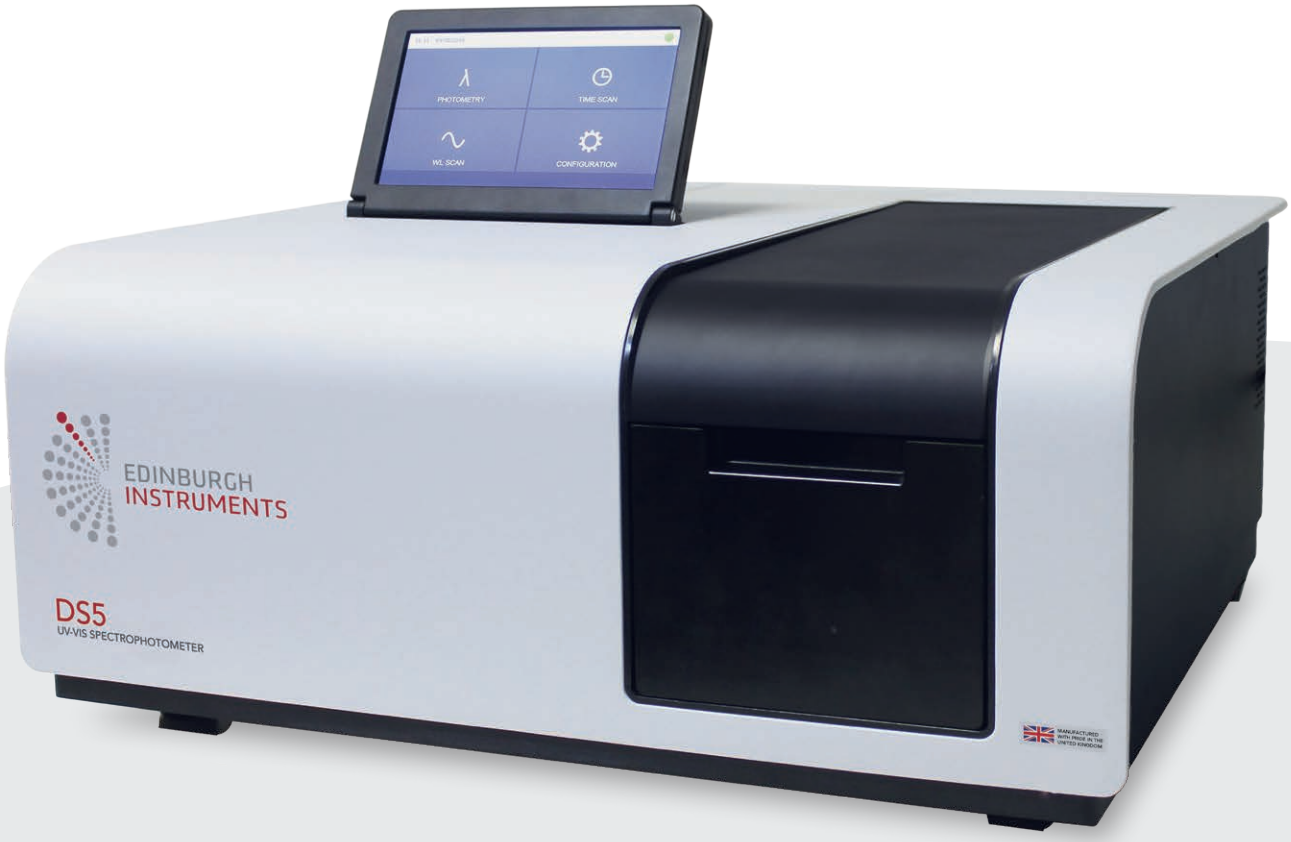
EDINBURGH INSTRUMENTS

REPRESENTANTE EN ARGENTINA:

SC INSTRUMENTS SA

info@scinstruments.com

+54 11 5239-0688



The DS5 UV-Vis Spectrophotometer is a high performance dual beam instrument suitable for many analytical applications where accuracy and precision measurements are key to your results.

Developed and designed in the UK, the DS5 measures absorption and transmission as a function of wavelength and provides a modern, user-friendly and accurate spectrophotometer for a wide range of sample types and measurements.

Utilising a dual lamp and Czerny-Turner configuration monochromator, the DS5 features a compact, reliable and high throughput optical system which ensures impressive spectral performance. Additional benefits include stray light, baseline flatness, wavelength and photometric accuracy and reproducibility.

- User selectable variable bandpass options at 0.5, 1.0, 1.5, 2.0 or 4.0 nm
- Fast scanning – up to 6,000 nm/min to aid sample analysis throughput
- Automatic accessory recognition connected to the DS5
- Modern touchscreen interface with intuitive menus and functions to ensure ease of use for standalone control
- USB, SD card and internal data storage for convenient retrieval of methods and results
- Compact footprint to maximise available bench space in the laboratory

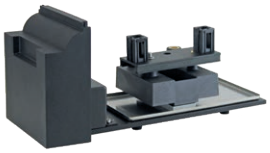
SAMPLE ACCESSORIES

REPRESENTANTE EN ARGENTINA:

SC INSTRUMENTS SA

info@scinstruments.com

+54 11 5239-0688



STANDARD CELL HOLDER

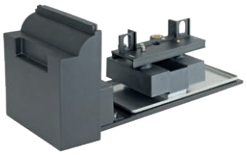
The standard cell holder is 2-position and holds traditional 10 mm path length cells. A micro-volume cell holder option for 50 µl cells is also available.

LONG PATH CELL HOLDER

Designed for low concentrations or absorbance, the long path cell holder holds two rectangular cells with an optical path length of 10 mm to 100 mm.

GLASS FILTER HOLDER

Designed for measuring the transmittance/absorbance of glass samples or filters. Sample dimensions up to 55 mm x 100 mm with 5 mm thickness can be accepted.



FILM HOLDER

Designed for measuring the transmittance/absorbance of thin-film samples. Sample dimensions up to 25 mm x 50 mm can be measured.

STANDARD CELL HOLDER - THERMOSTATIC

Designed for incubation or temperature stabilisation from room temperature to +40°C. Temperature stability ±0.3°C.

6-POSITION CELL HOLDER

Mount up to 6 standard 10 mm path length cells with auto-changeover of sample. A temperature controlled version is also available.

AUTO SIPPER

Designed for rapid and automatic measurement of multiple or large amounts of liquid sample without changing cells. A temperature controlled version is also available.

MICRO FLOW CELL

Designed for continuous measurement of trace samples. Flow cell capacity of 70 µl, 10 mm path length with Teflon tubing.

NAME	DESCRIPTION
Standard Cell Holder	2-Position cell holder for standard 10 mm cells
Standard Cell Holder - Thermostatic	Standard cell holder with temperature control from room temperature up to +40°C
Long Path Cell Holder	Holds two rectangular cells with an optical path length of 10 mm to 100 mm
Glass Filter Holder	Holds glass samples/filters for transmittance/absorbance measurements
Film Holder	Holds thin-film samples for transmittance/absorbance measurements
6-Position Cell Holder	Holds up to six 10 mm cells in a carousel with auto-rotation into the sample beam
6-Position Cell Holder - Thermostatic	6-position cell holder with temperature control up to +40°C
Auto Sipper	For multiple or large amounts of liquid samples without manual washing or changing of cells
Auto Sipper - Thermostatic	Auto Sipper with temperature control up to +40°C
Micro Flow Cell	Continuous measurement by injection with syringe or other device for volumes up to 70 µl
Micro Cell Holder	Holds micro cells for measuring micro-volumes of 50 µl

USER INTERFACE FUNCTIONS

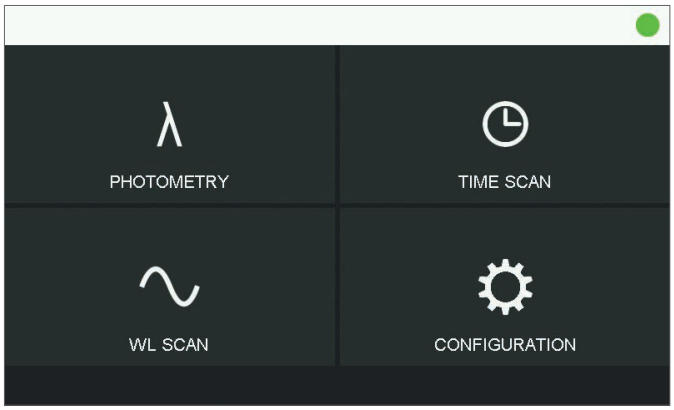
REPRESENTANTE EN ARGENTINA:

SC INSTRUMENTS SA

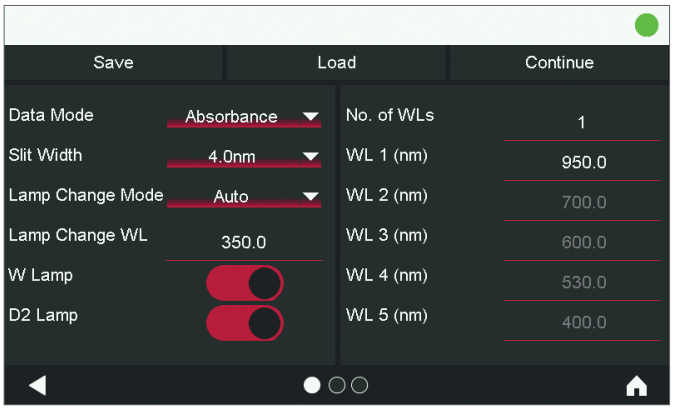
info@scinstruments.com

+54 11 5239-0688

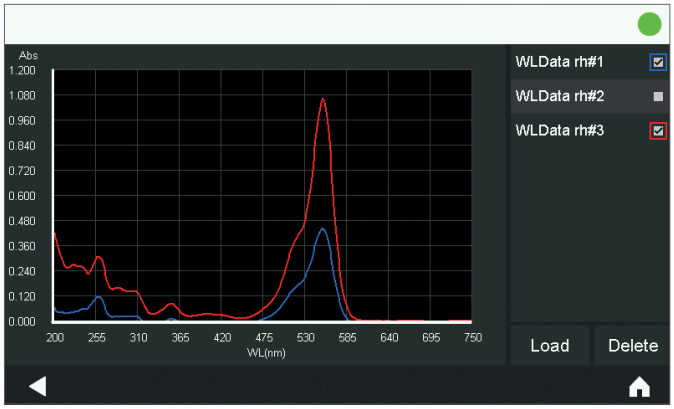
HOME SCREEN



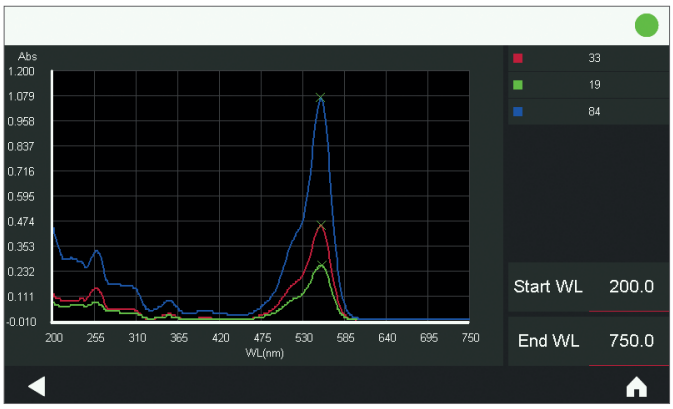
MEASUREMENT SETUP



SPECTRUM OVERLAY



AREA CALCULATION



MEASUREMENT MODES

Photometry Mode: Perform quantitative analyses in either absorbance or transmittance modes. Select from single up to 5 different individual wavelengths, nucleic acid/protein A260/A280 ratios and set up calibration curves for concentration measurements.

Time Scan: Perform kinetic measurements for time periods ranging from 1 minute to >27 hours. Measurement intervals are factory preset and automatically selected when the scan time is set.

Wavelength scan: Perform a full spectral scan from 190 nm - 1100 nm at any of 9 incremental and preset selectable scan speeds starting from a high resolution 10 nm/min up to a maximum scan speed of 6,000 nm/min. Data is displayed as a graphical spectrum on which data analysis can be performed through the touchscreen interface with zoom, peak-valley, smoothing and other functions available through the easy to use menu interface.

VALIDATION FUNCTIONS

To ensure optimum instrument performance, self-diagnosis incorporating a number of parameters and wavelength calibration are automatically initiated upon start-up. Furthermore, the DS5 is equipped with a GLP/GMP feature for analyses requiring validation and auditing. Parameters such as wavelength accuracy, wavelength reproducibility, bandpass, baseline flatness, baseline stability and noise level can all be validated.

- > Concentration measurement
- > Absorbance/Transmittance measurement
- > Hexavalent Chromium, Nucleic acid measurement (nucleic acid purity, nucleic acid concentration, protein concentration calculation)
- > Wavelength scan
- > Time change
- > Single and multi-wavelength photometry

DATA HANDLING

- > Scale changing, Trace, Spectrum overlay, Peak & trough detection, Smoothing, Differentiation, and Area & rate calculating
- > Internal memory, External USB, SD card
- > File output in CSV format

SPECIFICATIONS

REPRESENTANTE EN ARGENTINA:

SC INSTRUMENTS SA

info@scinstruments.com

+54 11 5239-0688

Optics	Czerny-Turner, Dual Beam Monochromator
Wavelength Range	190 nm - 1100 nm
Spectral Bandwidth	0.5 nm, 1 nm, 1.5 nm, 2 nm and 4 nm
Stray Light	≤0.10% (220 nm NaI, 340 nm $NaNO_2$)
Wavelength Accuracy	±0.1 nm
Wavelength Repeatability	±0.1 nm
Photometric Range	Absorbance: -3.4 to +3.4, %T: 0 to 300, Concentration: 0,000 to 9,999
Photometric Accuracy	±0.002 Abs (0 - 0.5 Abs), ±0.004 Abs (0.5 - 1.0 Abs), ±0.008 Abs (1.0 - 2.0 Abs), ±0.3% T
Photometric Reproducibility	±0.001 Abs (0 - 0.5 Abs), ±0.002 Abs (0.5 - 1.0 Abs), ±0.004 Abs (1.0 - 2.0 Abs), ±0.1% T
Wavelength Scan Speed	10, 100, 200, 400, 800, 1200, 2400, 3600, 6000 nm/min
Baseline Stability	0.0003 Abs/hr (500 nm, 2 hour lamp warm-up period)
Baseline Flatness	±0.0009 Abs (200 nm - 950 nm)
Light Source	Tungsten-Halogen and Deuterium Lamps
Light Source Switching	Automatic switching selectable for 325 nm - 370 nm range
Detector	Silicon Photodiode
Display	7" Touchscreen
Dimensions	500 mm (W) × 475 mm (D) × 250 mm (H)
Net Weight	20 Kg (approx)
Power Supply	100 - 240V, 50/60 Hz, 150VA
Ambient Temperature	10°C - 35°C
Output Device	USB flash drive, SD card
Interface	USB PC interface

Customer support is available worldwide

EDINBURGH INSTRUMENTS

2 Bain Square,
Kirkton Campus,
Livingston, EH54 7DQ
United Kingdom

Tel: +44 (0)1506 425 300
Fax: +44 (0)1506 425 320

sales@edinst.com

U.S. OFFICE CONTACT:

Tel: +1 800 323 6115
Fax: +44 (0)1506 425 320

ussales@edinst.com

edinst.com

MANUFACTURED WITH PRIDE IN THE UNITED KINGDOM