EDINBURGH ANALYTICAL

DB30 DOUBLE BEAM UV-VIS SPECTROPHOTOMETER

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EXCELLENCE IN SPECTROSCOPY
PRECISION IN EVERY MEASUREMENT

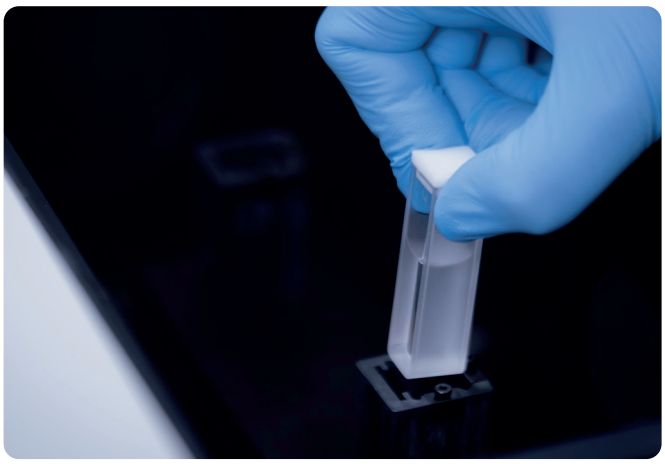
EDINBURGH ANALYTICAL

Edinburgh Analytical provides cutting-edge solutions and support for general and analytical laboratories while maintaining the core values and culture of excellence that define Edinburgh Instruments.

EDINBURGH INSTRUMENTS

Edinburgh Instruments has been providing high performance molecular spectroscopy instrumentation for over 50 years.

Our photoluminescence, Raman, and transient absorption spectrometers set the standard in advanced optical spectrometers for research and industry.

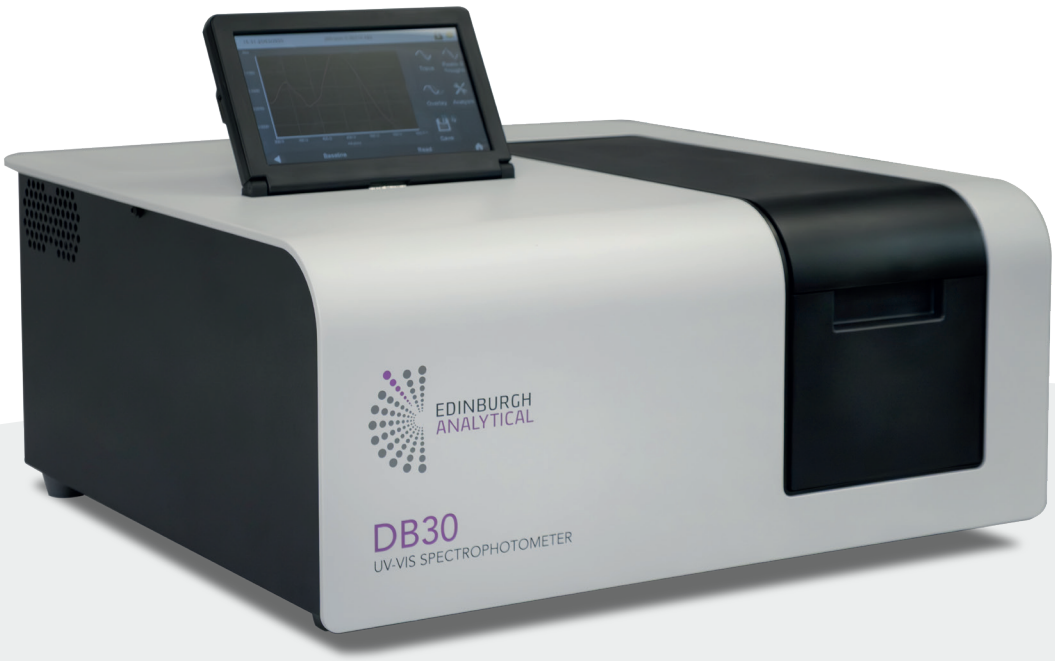


DB30 APPLICATIONS

Pharmaceuticals | Food | Molecular Biology | Chemistry | Life Sciences | Environmental | Petrochemical

MOLECULAR SPECTROSCOPY | UV-Vis | FTIR | Fluorescence

INTRODUCING DB30
HIGH PERFORMANCE DOUBLE BEAM UV-VIS SPECTROPHOTOMETER



The DB30 UV-Vis Spectrophotometer is a high performance double beam instrument suitable for many analytical applications where accurate measurements are key to your results.

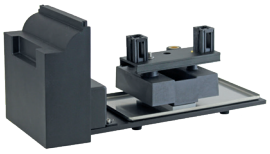
The DB30 measures absorption and transmission as a function of wavelength and provides a modern, user- friendly and accurate spectrophotometer for a wide range of sample types and measurements.

Utilising a dual lamp and Czerny-Turner configuration monochromator, the DB30 features a compact, reliable and high throughput optical system which ensures impressive spectral performance. It can be configured with PC control software or as a standalone instrument using the touchscreen included in every DB30 unit.

KEY FEATURES

- User selectable variable bandpass at 0.5, 1.0, 1.5, 2.0 or 4.0 nm
- Fast scanning – up to 6,000 nm/min for high sample analysis throughput
- Automatic accessory recognition
- Modern touchscreen interface for full standalone control
- Optional Visacle® software for PC control
- USB, SD card and internal data storage for convenient retrieval of methods and results

SAMPLE ACCESSORIES



STANDARD CELL HOLDER

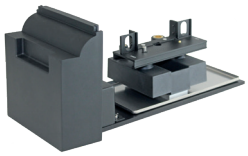
The standard cell holder is 2-position and holds traditional 10 mm path length cells. A micro-volume cell holder option for 50 µl cells is also available.

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.

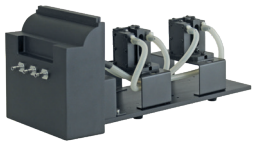
GLASS FILTER HOLDER

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.



THERMOSTATIC CELL HOLDER

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.

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
Thermostatic Cell Holder	Thermostatic 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
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

INSTRUMENT CONTROL

CHOOSE BETWEEN TOUCHSCREEN OR SOFTWARE OPERATION

The DB30 can be operated via a touchscreen that is included with every DB30. Optional Visacle® PC-control software is available for laboratories wishing to control their instrument from a computer or manage their experiment database. FDA 21 CFR Part 11 compliance is also available as an option.

TOUCHSCREEN OPERATION

MEASUREMENT MODES

- **Wavelength scan:** Measure absorbance, transmission or detector signal selecting the spectral range, scan speed, wavelength increment, bandwidth as well as advanced instrumental parameters
- **Time scan:** Perform kinetic measurements for time periods ranging from 1 minute to >27 hours
- **Photometry mode:** Multiple wavelengths measurement in either absorbance or transmittance modes, from single up to 10 different individual wavelengths
- **Quantitation:** Calibration curves including second order and multi-wavelength data points
- **Application wizards:** Protein, nucleic acid, hexavalent chromium

DATA HANDLING

- Rescaling, data readout, spectrum overlay, peak & trough analysis, arithmetic, smoothing, differentiation, area & rate calculating
- Report generation and file output in CSV format
- Internal memory, external USB, SD card

Measurement parameters, acquisition and analysis on DB30 touchscreen

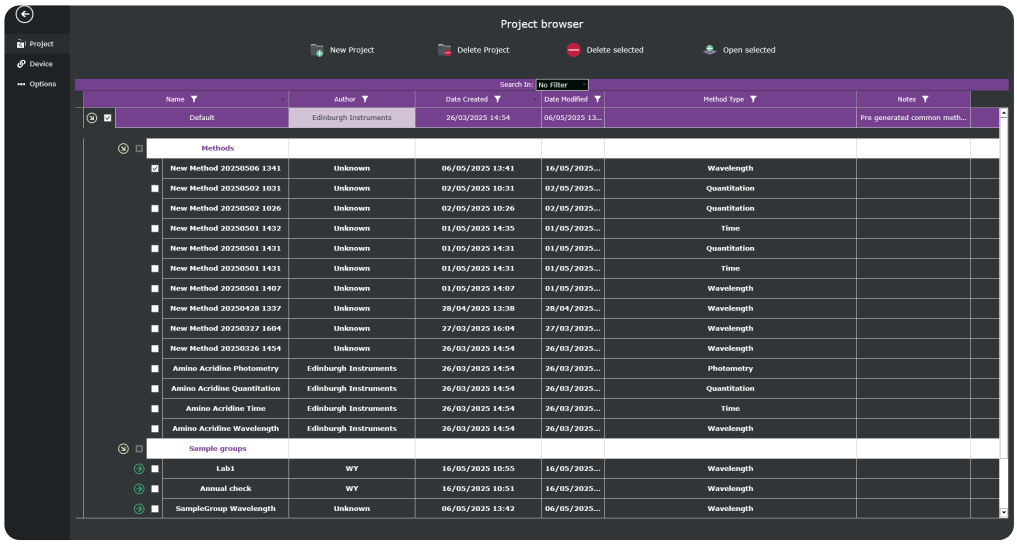
USER FRIENDLY SOFTWARE

VISACLE® PC-CONTROLLED SOFTWARE

Visacle® offers all control, validation, data analysis and reporting functionality for DB30 in one PC-operated software package. Collected data is stored in a secure database, where it can then be organised and analysed, as well as exported in .TXT, .CSV or PDF format. Visacle® can be purchased as a CFR Part 11 compliant package for users requiring additional security.

Visacle-CFR features include:

- Configurable user profiles with secure login and e-signatures
- Audit trail logging of all actions taken
- Permission system to restrict actions and data access to authorised users



Visacle® spectral acquisition interface and CFR project browser

SPECIFICATIONS

DB30 UV-Vis Spectrophotometer	
Working Environment and Requirements	
Working Temp	10 - 35°C Ambient temperature
Power Supply	100-240 V, 50-60 Hz
Main Specifications	
Optics	Czerny-Turner, Double 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 at D2 peak 656.1 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)
Wavelength Scan Speed	10, 100, 200, 400, 800, 1200, 2400, 3600, 6000 nm/min
Noise	0.0001 Abs
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
Software	Touchscreen operation, PC-controlled software or CFR compliant PC-controlled software
Dimension (L×D×H)	500 mm (W) × 475 mm (D) × 250 mm (H)
Net Weight	20 kg (approx)
Output Device	USB flash drive, SD card
Interface	USB PC interface
Scope of delivery	
Box includes	1 x DB30 Unit 1 x Operation Manual 2 x Quartz Cuvette
After Sales Service	
Warranty	Guaranteed (under normal maintenance) for one year from the date of delivery

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SCAN ME

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Customer support is available worldwide

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