

Olis DM 45 Spectrofluorimeter

As a research-quality scanning spectrofluorimeter, the DM 45 is equally at home in research and pedagogical environments.

The DM 45 features open and obvious architecture making it particularly friendly for students experimenting and learning about fluorescence related techniques

Applications (standard configuration):

Excitation and emission scanning
Synchronous scanning
Excitation/emission matrix
Slow (>10 msec per point) kinetic reactions
Single point intensity measurements

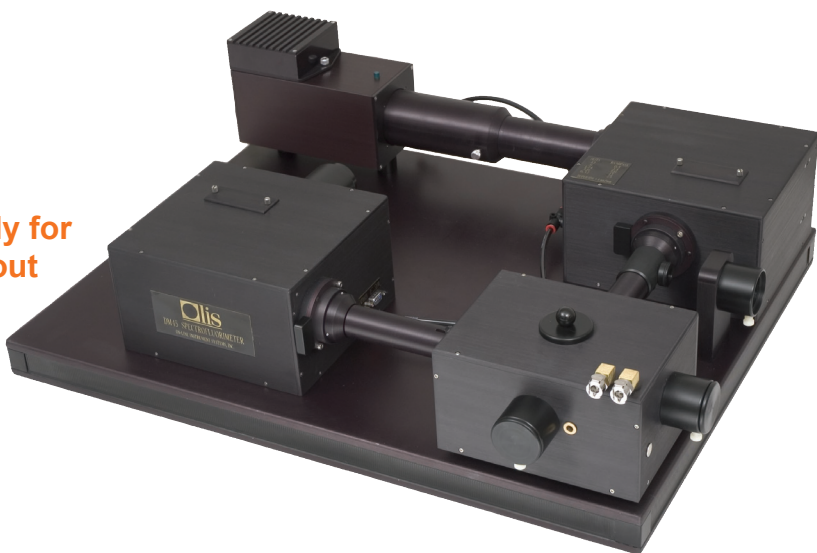
Upgradeable to Support:

Stopped-flow (<2 millisecond dead time)
Anisotropy, circularly polarized luminescence, and fluorescence detected circular dichroism (all with the addition of a Polarization Toolbox!)
Peltier temperature control
Automated turret for four samples
Solid sample holder
Cryogenic sample holder
Automated titrator
Absorbance, single and dual beam
NIR extension (up to 2500 nm)
Flash photolysis (data collection rate up to 50 nsec per point)

Technical Specifications:

- 75 W xenon arc lamp (150 W available)
- Excitation range: 200 nm – 800 nm (NIR available)
- Detection: photon counting, 230 nm - 870 nm

- 0.5 nm – 25.0 nm spectral bandwidth
- Scan speed: to 2000 nm/min
- Raman S/N of 2200
(75 W lamp, 1 sec integration, 5 nm bandpass)



Strengths of the Olis DM 45 spectrofluorimeters:

Research level sensitivity
Open architecture modularity for easy access
Easily upgraded using Olis and third party accessories
Indestructible construction from cast aluminum plate
Lamp mounted in an elliptical housing for five-fold greater output
Intuitive software for instrument control, data acquisition, and modern data analysis
Extended spectral range available with interchangeable optics and detectors

Olis DM 45 Specifications

DM 45

HARDWARE SPECIFICATIONS

Light source	Standard: 75W xenon lamp arc lamp; Optional: 150W arc lamp
Excitation monochromator	Standard: Single concave 1200 l/mm, 350 nm blaz; Optional: Single, concave 1200 l/mm blazed at 250 nm 450 nm
Emission monochromator	Standard: Single concave grating, 1200 l/mm, 450 nm blaze Optional: Single concave grating, 1200 l/mm, 250 nm or 350 nm blaze
Wavelength scale	185-1100 nm
Measuring wavelength range (photon counting)	Standard: 230-870 nm
Spectral bandwidth	Standard: 0.5, 2.4, 5.0, 13, and 25 nm; Optional: Slit wheel with 0.2, 1.1, 3.0 and 6.0 nm
Wavelength accuracy	± 0.2 nm
Monochromator motor step	0.125 nm/step
Sensitivity	Standard: S/N of 2200 (75W lamp); Optional: S/N of 4000 (150W lamp); Conditions: 350 nm excitation, 5 nm bandwidth, 1 sec integration
Maximum data collection rate	20 Hz; Optional 20 MHz (DM 45K)
Integration time	10 ms to 100s
Wavelength scanning	Arbitrary to 2000 nm/min
Wavelength slewing speed	4000 nm/min
Interface	RS232 and/or USB
Dimensions and weight	Optical bench is 56 cm x 74 cm and instrument weighs 55 kg
Power requirements	120-240V; 50/60Hz
Operational temperature range	15-30° C
Operational humidity range	< 90%
Warranty	Standard: One year full service; Optional: Extended warranty or on-site service plans
Optional Accessories	Peltier cell holders, multi-cell turret, polarizers, polarization module, automated shutters, titrator, stopped flow, solid cell holder, cryostat, flash lamp, slit wheel

SOFTWARE SPECIFICATIONS

Measurement	Excitation, emission, and synchronous scanning, time-course measurement, programmable repeated scans, automated emission excitation matrix scanning, scripted temperature control, G-factor free anisotropy.
Data processing	Arithmetic processes involving spectra and/or constants, smoothing, first through fifth derivatives, 1/Y, logarithmic conversion, data printout, emission correction, interpolation, peak-finder, area calculation, averaging scans
Data output	3D graphical data, export to Excel, Olis format, conversion to ASCII
Data fitting	Global analysis using SVD, Two dimensional kinetic fits
PC requirements	Dell Intel i3, 1 GB RAM, 250GB HD; Windows XP