

SX20 Stopped-Flow Spectrometer

The **SX20** is the most complete and flexible stopped-flow spectrometer available today. It offers unsurpassed sensitivity in absorbance, fluorescence and light-scattering detection modes, and the capability to acquire equilibrium spectra, single kinetic traces or multi-wavelength data sets (time-resolved spectra).

At the heart of the system is a removable cell cartridge, housing either a 20 μ l (1.1ms dead-time) cell or a 5 μ l (0.5ms dead-time) cell. A quench-flow accessory can also be fitted.

The **SX20** is controlled by our new **Pro-Data** instrument software and electronics running under Windows™, which provides comprehensive tools for data acquisition, display and analysis, and our PC ProK and ProKII software packages provide the most powerful and easy to use global analysis tools for multi-wavelength data analysis.

A comprehensive range of upgrade options are also available (see overleaf).



SX.20 Stopped-Flow Spectrometer (with option SQ.1)

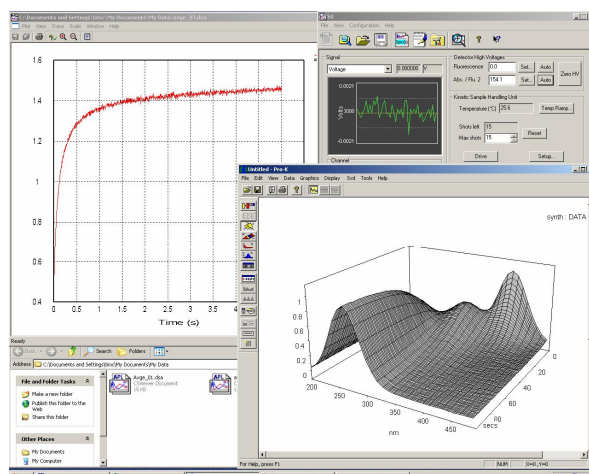
Applied Photophysics have been manufacturers of kinetic instrumentation since 1971, and have pioneered development of modern stopped-flow instrumentation. With over 600 stopped-flow spectrometers supplied since 1990, Applied Photophysics is the world's leading supplier of stopped-flow spectrometers.

Our ongoing development of stopped-flow applications and our large customer base are your assurances that we provide world class expertise and technical support for your kinetics research with the **SX20**.

Summary information on the **SX20** and upgrade options are given overleaf. More detailed information on instrument performance and upgrade options are available on request - or

visit our website at www.photophysics.com

We welcome the opportunity to demonstrate the superior performance of the **SX20**. Please call us to discuss your specific requirements and to arrange for an evaluation using your samples.



SX20 Stopped-Flow Spectrometer - standard features

- Optimised for both absorbance and fluorescence detection without the need for reconfiguration.
- Unsurpassed sensitivity: ultra stable xenon light source and the highest photometric accuracy.
- Programmable monochromator enabling acquisition of equilibrium absorbance spectra and multi-wavelength kinetic data sets.
- Removable cell cartridge with a 20µl volume, 1.1ms dead-time, cell with optical pathlengths of 10mm and 2mm (other cells can be fitted).
- Minimum sample volume requirement of 40µl per syringe.
- **Pro-Data Windows**TM control software with comprehensive acquisition, display and analysis tools. Standard features include: wavelength scanning, repeat drives for signal averaging, acquisition of time-resolved spectra (SpectraKinetic technique), linear- logarithmic- and split-timebase, digital oversampling, temperature-dependent scanning and kinetics capability.
- Flow circuit materials suitable for anaerobic experiments and resistant to aggressive reagents.
- Very wide temperature range (+60°C to -20°C) .
- Flat-screen monitor, high resolution printer and network ready PC.

Upgrade Options for new and existing systems.

SQ.1 Sequential mixing.

Sequential mixing of three samples with a programmable delay time and no instrument reconfiguration.

PDA.1 Photodiode Array

Enables acquisition of time-resolved absorption spectra from a single stopped-flow drive. No optical alignment or calibration is required, and configuration to and from photomultiplier detection takes a few seconds. Features digital oversampling, linear and logarithmic acquisition, variable integration time (up to 1000 spectra/s).

UV.1 Boosted Deuterium Light Source

Used with option PDA.1 for measurements down to 200nm.

DD.1 Dual Detection.

Simultaneous acquisition on two detection channels (absorbance and fluorescence).

DF.1 Dual Fluorescence Detection

Second detection channel and fluorescence detector for simultaneous detection of two emission wavelengths (includes option DD.1)

FP.1 Fluorescence Polarisation/Anisotropy

T-format measurement of fluorescence polarisation kinetics and steady-state spectra. Superb sensitivity and a straightforward set-up procedure. Anisotropy and total emission detection modes are also provided. Robust fitting of the kinetic data is available using the **Pro-FP** analysis software (option FP.1 includes options DD.1 and DF.1).

SEM.1 Scanning Emission Monochromator

Second programmable monochromator to enable automated acquisition of equilibrium and time-resolved fluorescence spectra.

AM.1 Scanning Monochromator (far-UV)

Second programmable monochromator to enable a double-monochromator configuration suitable for far-UV absorbance detection (to 190nm).

AN.1 Anaerobic Accessory

Facilitates the rigorous exclusion of oxygen outside of a glove box.

RC5.1 5µl volume cell in removable cartridge. Offers a dead-time of 0.5ms and optical pathlengths of 5mm and 1mm.

QFA.1 Quench Flow Adapter

Enables quench-flow experiments (with option SQ.1)

PC ProK global analysis and simulation software.

Uniquely powerful and easy to use, providing complete global analysis of time-dependant spectral data. SVD analysis and robust global fitting, even to complex reaction schemes, is available through the use of fast numerical integration techniques coupled to a symbolic reaction scheme editor. Simply type in the proposed reaction scheme. True intermediate spectra of all coloured species are calculated together with their associated concentration profiles. A full data simulation facility is also included.

Pro-KII Advanced Global Analysis Software

For 2nd order global analysis of concentration dependent multi-wavelength data sets. Also supports mixed data types e.g. CD, fluorescence and absorption.

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Applied Photophysics was established in 1971 by the Royal Institution of Great Britain

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