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Ref. No. 171 (PR. No. 1000020827) **Stopped Flow Spectrometer** RFX. No. 6100000799

Technical Specifications for Stopped Flow Spectrometer

An upgradable, automated, double mixing stopped flow spectrometer with configuration for optical modes like absorbance and fluorescence measurements for rapid kinetics applications.

Equipped with independent stepping motors to drive the syringes, motorized monochromator and automatic concentration studies possible by setting a series of concentration in software with an expected dead time < 1ms.

Detailed Minimum expected specifications described as below

Spectrometer Specifications:

Spectrometer	Dedicated Stand Alone Spectrometer with Motorised Monochromator for Absorbance and Fluorescence Measurements Capabilities
Excitation Wavelength range	200-800 nm or better
Wavelength Accuracy	±0.5 nm or better

Light Source	Xe Lamp and XeHg lamp Standard both (one for scanning and one for single wavelength respectively)
Detector	Photomultiplier tube
Sampling rate	10 μ s to 1000s
Detection Modes	Absorbance, Fluorescence and 90°light scattering
Detection Channel	Suitable detection Channel to measure absorbance and fluorescence Future Upgradation of additional Detection Channels Should be available
Number of detection windows	3
Emission Fluorescence with Cut-off filters	One set of 220nm (standard) with spacers/adaptors Additional set of 550 nm should be quoted in main offer
Cuvette	One set of Standard 0.8mm to 2mm path length with dead time <1.2ms
Micro Cuvette Accessory	Additional Micro Cuvette with 1mm to 10mm path length with dead time <0.7ms
Double Mixing Stopped Flow Specifications:	
Number of syringes	3

Syringe Volume	2ml to 10ml Standard
Syringe material	PEEK/ Glass
Mixing	Single and Double Mixing Capabilities
Number of mixers	2 Independent T-Mixers/Ball Mixers
Number of Drive Mechanisms/Motors	3 (Independent)
Precision of Drive Mechanisms/Motors	<11 nl per step or better
Sample consumption	Priming volume <100 µl per syringe or better
Mixing ratio	variable from 1:1 to 1:100 with possibility to do all asymmetric ratio
Minimum injection volume	<25 µl or better
Compatibility	Syringes and Cuvettes and all internal parts should be compatible to 100% solvents operations
Anaerobic operation	Loading ports for Anaerobic operations should be provided for each syringes
Data Acquisition and Software Control	

Software

Suitable Windows Operating System based Data Acquisition software for operation of the instrument.

Controlled parameters like loading, Delivery, mixing, flow rate control, data acquisition and data collection should be possible.

Single Mixing, Multi-mixing Experiment Protocols

Automatic concentration studies possible by setting a series of concentration in the software

Aging experiments

Provision in the software to show estimated dead time value in an experiment

Data processing analysis should be available like Global Fitting

Provisions for data merging and exporting data to text/excel format

Two Copies of Licensed Version Data Acquisition Software should be provided

One copy of User manual should be provided

Warranty	Standard for One year on electronics and 3 years on Drive Mechanisms for Trouble free operations.
Installation	<p>Installation, Training and Demo on Site for atleast Three days</p> <p>Application Support should be available for consecutive Two Years after the installation (online/offline)</p>
Desktop Computer	Branded Desktop Computer i5, 4GB RAM, 1TB HDD, LED Monitor, Keyboard Mouse and Genuine Windows 10 OS
Necessary Accessories:	All necessary accessories should be supplied with the instrument as a package including necessary cables, power cables, modules, kits, tubing, adapters, etc. for complete functioning of the equipment on site