

# Rapid-Scan Stopped-Flow Spectrometer

**RSP-2000**



RSP-2000-03

RSP-2000 is a state of the art stopped-flow system which has accumulated over 35 years of wealth of experience on the market. It has fast multichannel detection capability, so it is possible to measure up to 8000 absorption spectra under the reaction at the shortest of 1 millisecond intervals.

Monochromatic detection by photomultiplier is provided as standard. The standard configurations are: Light source, Stopped-flow mixer with an Automatic Cock, Spectrometer Data Processor, Multichannel detector, Photomultiplier and Optical Guides, High-performance software helps you to acquire the best data by the easiest operation so as to calculate the reaction velocity on the same Flow Flash measurements with laser are available on request.



Stopped-Flow mixer with an automatic cock

# Rapid-Scan Stopped-Flow Spectrometer

## RSP-2000



### System Components

		RSP-2000-01	RSP-2000-02	RSP-2000-03
Light Source	1	○	○	○
Stopped-Flow Mixer with an Automatic Cock	1	○	○	○
Multi-Channel Detector	1	○	–	○
Monochromatic Detector	1	–	○	○
System Controller	1	○	○	○
Optical Guides	1	○	○	○
Data Processor	1	○	○	○

### Specifications

#### Light Source

Lamp	150W Xe arc lamp
Lamp Housing	Air-cooling, shutter, Iris, Optical filter holder

#### Stopped-Flow Mixer with an Automatic Cock

Mixing Dead Time	3ms or less (10mm cell); 0.9msec (10mm microcell)
Mixer	Double 2JET
Mode	Piston-drive, front-stop
Cells	10mm cell for absorption measurement 2mm cell for fluorescence measurement (option)
Mixing Ratio	1:1 (up to 1:9 is available by option)
Sample Amount	75 $\mu$ l ~ 250 $\mu$ l/shot
Temperature Range	5°C ~ 60°C

#### Multi-Channel Detector

Spectrometer	Polychromator PK120
Dispersion Element	Aberration-corrected Concave Grating
Brightness	F/2.9
Linear Dispersion	22nm/mm
Slit Width	0.05mm, 0.1mm, 0.2mm
Second Diffraction Cut-off	Dedicated filter is incorporated
Detector	Photodiode array 512ch
Maximum Scan Speed	1msec ~ 10sec/scan
Number of Scan	Up to 8000
Spectral Width	560nm

\*Specify central wavelength at the time of order

#### Monochromator Detector

Spectrometer	Monochromator MF200
Dispersion Element	Plane Blazed Holographic Grating
Brightness	F/3.5
Linear Dispersion	8.5nm/mm
Slit Width	0.1mm, 0.2mm, 0.5mm
Second Diffraction Cut-off	No
Detector	Hamamatsu PMT R2949
Filter Time Constant	<10 $\mu$ s, 330 $\mu$ s, 1ms, 3.3ms, 10ms, 33ms
Sampling Time	10 $\mu$ s ~ 600ms

#### Optical Guides

Material	UV-transmittable quartz
Length	1m

#### Data Processor

OS	Windows 7/XP/2000
Interface	PCI bus
Software	Automatic washing, non-linear least square fitting, data storing in text file

### Optional Accessories

- Kit for fluorescence measurement
- Bath circulator
- Double-mixer with an automatic cock
- Low-temperature double-mixer with an automatic cock
- Light Source for fluorescence measurement (150W Xe-Hg lamp)
- NIR detection (monochromatic and/or multi-channel)
- Microcell kit
- Reservoir syringe kit

\*Specifications and appearances are subject to change without prior notice.



TII Group

### UNISOKU Co., LTD.

2-4-3 Kasugano, Hirakata, Osaka, 573-0131, Japan

Tel +81-72-858-6456 Fax +81-72-859-5655

e-mail: info@unisoku.co.jp

www.unisoku.com