HORIBA Scientific

Rapid Peltier-based temperature-controlled sample holders for HORIBA spectrofluorometers

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
CUSTOM SOLUTIONS
PARTICLE CHARACTERIZATION
RAMAN / AFM-RAMAN / TERS
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

Software-controlled for automated temperature-dependent fluorescence

Peltier-based Heated/Cooled Cuvette Holder

For rapid control of the sample's temperature in a HORIBA fluorometer sample compartment, choose the 1-position or 4-position Peltier-controlled thermostattable cuvette holder trays.

The Peltier device heats and cools the sample thermoelectrically and quickly, without overshooting the target the way a circulating refrigerated controller does.

The temperature range is –15 °C to +105 °C.

To prevent condensation of moisture on chilled cuvettes, an injection port for dry nitrogen gas is provided.

All software is included, along with a controller and stirring mechanism.

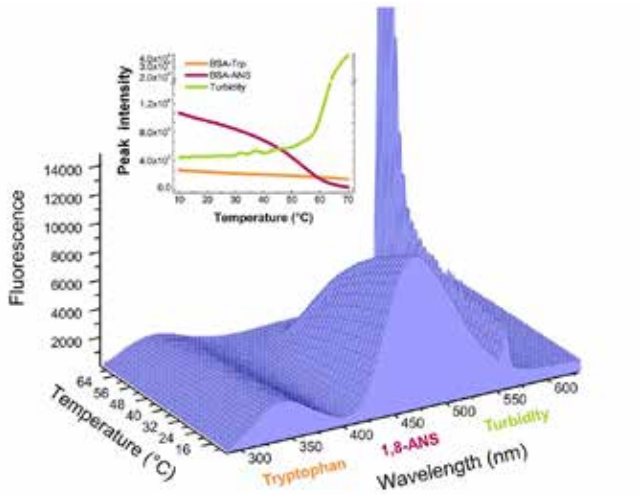
Perfect for automated temperature stepping experiments or ramping.

The Peltier device is mounted on an easily-exchanged sample tray consisting of a base and front panel, with utilities conveniently brought to the front panel. HORIBA provides a fully integrated system with sophisticated software control.

These Peltier-based temperature-controlled cuvette holders are compatible with the HORIBA Fluorolog-QM, Nanolog®, FluoroMax® and Aqualog® spectrofluorometers.

Key Features and Benefits:

- 4 optical ports (3 for the four-position turret)
- Rapid, precise temperature control
- Optional extended temperature range
- Windowed jacket available for temperature extremes
- Variable speed magnetic stirring
- Dry gas purge for work at low temperatures
- Sample tray with utilities brought to front panel
- Probe input for sample temperature
- NIST-traceable temperature calibration
- Fully integrated software control



Thermal unfolding of bovine serum albumin in PBS and 1,8-ANS followed using three observables: The quenching of intrinsic tryptophan fluorescence by water, the quenching of the 1,8-ANS, and the increased 2nd order scattered light which reports turbidity from protein aggregation.

Specifications

	Single Position Cuvette Holder	Four-position Turret
Number of cuvettes controlled	1	4
Typical use	Fluorescence	
Standard cuvette size (outside)	12.5 mm x 12.5 mm	
Compatibility with the TCSPC lifetime entrance port	YES	NO
Optical ports per cuvette	4	3
Optical port dimensions	12 mm high x 10 mm wide	12 mm high x 8 mm wide
Built-in optical slit holders	4 per cuvette	3 per cuvette
Cuvette z-height	8.5 or 15 mm for most models	
Temperature range easily achievable	-15 °C to +105 °C	-15 °C to +110 °C
Temperature accuracy	±0.30 °C from -20 °C to +110 °C	±0.20 °C from -20 °C to +110 °C
Temperature reproducibility	Better than ±0.07 °C	Better than ±0.09 °C
Thermistor probes accepted	Series 400 or Series 500	
Magnetic stirring motor type	Stepper	Stepper under each cuvette
Magnetic stirring speed range	1-2500 rpm	
Default stirring speed	1200 rpm	
Stirring speed best performance	60-1800 rpm	
Fluorometer compatibility	FluoroMax Plus, Nanolog, and Fluorolog-QM	

Basic Package

- Temperature-controlled cuvette holder or 4-Position cuvette changer (standard z-height = 15 mm)
- Base plate and front panel with utility access
- Temperature controller
- Chiller (no need for water supply)
- Accessories – magnetic stir bar, tubing, cables, optical slits, and opaque cap

Single Position
Cuvette Holder

4-Position
Cuvette Changer

Visit www.fluorescence.com for the FluoroMax Plus, Nanolog, and Fluorolog-QM brochures, and other reference material.

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