

HPCell

High Pressure Cell System

The HPCell is for fluorescence and absorption studies at pressures of up to 58,000 psi. The cell features three 10 mm-diameter quartz or sapphire windows placed at ninety degrees for the acquisition of either L- or T-format fluorescence measurements. A four-window cell is available for the simultaneous acquisition of fluorescence and absorption data. The cell can be used with laser, laser diode, light emitting diode (LED) or xenon arc lamps for the light source. Fiber-optic bundles are available to bring excitation light to the cell and then to divert the collected light from the cell to the instrument if a mounting kit is not available.

Spectrofluorometer mounting kits are available for:

ISS

- PC1, K2, Chronos

AVIV

- AFTF105

Edinburgh Instruments

- FS900

Hitachi

- F4500

JY-Horiba

- Fluorolog 2,3; Fluoromax 2, 3

SLM

- 4800, 8000, 8100, 48000

Spectrophotometer mounting kits are available for:

Shimadzu

- UV2501PC, UV1650PC

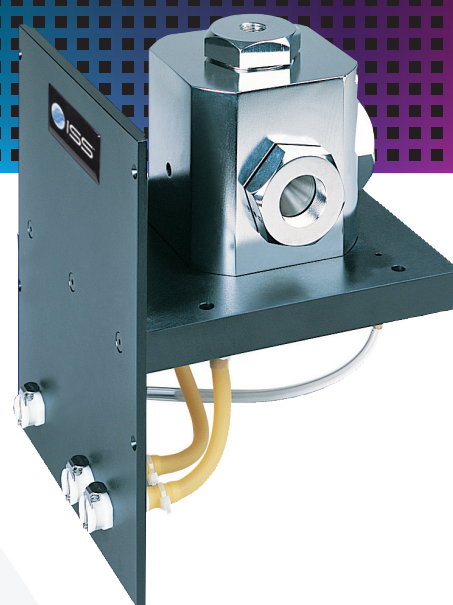
Varian

- Cary 14 UV/VIS, Cary 50, 100, 300

Spectropolarimeter mounting kits are available for:

Jasco

- J-710, J-715, J-810, J-815



Key Features

Ideal for fluorescence, absorption and Raman spectroscopy

Holds a pressure of 4000 bars (58,000 psi) using sapphire windows; up to 3000 bars (43,500 psi) using quartz windows

Electrical connection plug available for the application of a voltage

Pump and software for data acquisition

Interchangeable between multiple instruments

Cell

Cell Pressure

- Up to 3,000 bar with quartz windows;
- Up to 4,000 bar with sapphire windows

Temperature range

- -20 °C to 60 °C

Temperature control

- Built-in liquid circulation circuit

Thermal conductivity

- 12 W cm⁻¹ K⁻¹ at 20 °C;
- 16 W cm⁻¹ K⁻¹ at 200 °C

Windows

- Quartz (Q) or Sapphire (S)
- 10 mm effective opening
- Transmission range of 200 nm – 2000 nm (Q)
- Transmission range of 200 nm – 5000 nm (S)

Internal Cell Chamber

- Diameter: 22 mm;
- Height : 50.3 mm

Cell body, external dimensions

- 91.3 mm wide x 91.3 mm deep
- 39.3 mm from base to window centers

Hydrostatic Liquid

- Low fluorescence background, spectroscopic grade, ethanol; or HPLC water

Pump

Pressure gauge

- up to 6,000 bar

Pressure reservoir volume

- 116 ml

Pressure cell generator volume

- 10 ml manual pump

Tubing

- 1/8" diameter flexible tubing rated for up to 4,150 bar

Thermocouple

- Ni-Cr-Ni or Fe-Const

Cuvettes

- Round cuvette volume, 11 mm outer-diameter, 0.75 ml volume
- Round cuvette volume, 9 mm outer-diameter, 0.80 ml volume
- Square cell volume, 6x6 mm, 0.30 ml, volume

For more information on the HP Cell please email iss@iss.com or visit www.iss.com.



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