

For Analysis of Liquids or Solids from -190°C to 250°C



The Variable Temperature Cell Holder is the ideal accessory to use for the transmission study of liquid or solid samples at temperature range from -190°C and 250°C. The temperature achievable will be dependant on the type of sample cell used.

The Variable Temperature Cell Holder consists of a vacuum jacket (blue part) that contains a refrigerant dewar/cell holder assembly and a heating block that contains the appropriate cell. The cell used is a liquid cell (static or dynamic mode) or a solid holder according to the sample studied.

The whole assembly is operated within a vacuum environment maintained by the outer jacket.

The external windows are also heated to prevent condensation and these and the heating block are operated by a separate high stability controller supplied with the system.

Using a combination of refrigerant and control from the cell block heaters, any temperature from -190°C to 250°C can be achieved. Stability of the temperature is best maintained by using a refrigerant close to the target temperature.

NaCl windows are fitted as standard providing a useful spectral range from 40,000 to 600cm⁻¹ making them suitable for most studies from UV to Mid-IR.

Other window materials are available for studies outside of this range. Special versions of this cell have been designed for use in Raman and Fluorescence applications. These cells use four window ports and samples are contained in cuvettes or bulbs.

Features

- Programmable, controlled temperatures from -190°C to 250°C
- Dewar cooling system
- Heated external windows prevents condensation
- Can be converted to flow mode for liquids
- Baseplate or 3" X 2" mount

Applications

- Analysis under extreme temperature conditions
- Absorption band studies
- Polymerization studies
- Phase transition studies
- Reaction kinetics
- Polymorphism
- Catalysis
- Oxidation studies