

The Selector™

An expandable diffuse reflectance sampling system that can change with your applications



Diffuse reflectance is based upon the collection of radiation that has been diffusely scattered from the sample. The Specac Selector uses an optimized off-axis optics configuration which selectively collects the diffusely reflected components, whilst minimizing the specular component.

Various sampling cups are offered including a standard 11 mm diameter cup, a micro 4 mm diameter cup, and tilted cups. The tilted cups allow for collection of total reflectance, diffuse and specular components. In addition, an abrasive sampler, 12 mm diameter, can be used with Diabrase pads to allow quick and easy sample preparation of intractable solids.

Applications

- Powders
- Intractable solids
- Liquid samples as a dispersion over KBr matrix

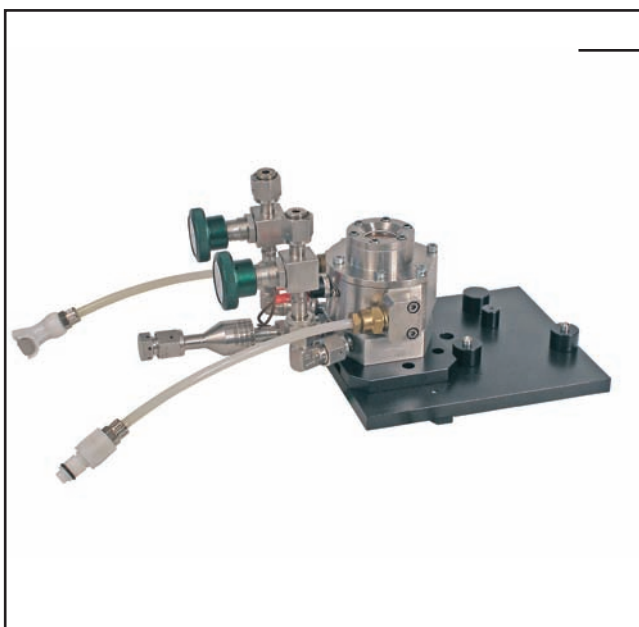
Features

- Diffuse or total reflectance capabilities
- Minimal alignment
- Easy sample handling
- Macro, micro and tilted cups
- Diabrase synthetic diamond abrasive pads

The abrasive pad is simply rubbed against the sample of interest and mounted in the Selector accessory. The Selector™ is mounted on its own baseplate. The off-axis design allows room for the use of specialist alternative configurations.

The Environmental Chamber option extends the sampling capabilities of the Selector.

The Environmental Chamber



Features

- Programmable controlled temperatures to 800°C
- Operates from vacuum (10^{-3} Torr) to high pressure (500 p.s.i.)
- Provides controlled atmosphere (gas inlet and outlet)
- Extensive safety features

This accessory allows for the study of diffusely reflecting solid samples in a controlled atmosphere ranging from ambient temperature to 800°C, and vacuum (10⁻³ Torr) to 500 p.s.i. pressure. The standard chamber window is ZnSe, which gives a good balance between IR transmission and mechanical strength. Other optical transmitting windows are available on request. The body is constructed from 316 stainless steel for ruggedness and chemical resistance. Safety features include a low voltage automatic power supply and an automatic shut-down feature, should the temperature sensor detect an overheating fault. A water cooling jacket keeps the outside of the chamber cool when operating at high temperatures and a safety "burst disk" activates whenever the pressure exceeds the recommended safety limit. The Environmental Chamber, in conjunction with the Selector, is ideal for use in chemical research such as kinetics, catalysis, surface analysis, polymerization and coordination chemistry.

Ordering Information

19900 The Selector™ Diffuse Reflectance System

Includes: optical unit with dedicated baseplate, Micro sample cup (4 mm dia.), 2 Standard cups (11 mm dia.), Diabrase abrasive sample pads (12 mm dia.) (20), 2 mounts for abrasive sample pads, tilted cup for total reflectance measurements

When ordering please specify Spectrometer make and model

19930 Environmental Chamber

Includes High Stability 4000 series Controller with optional computer interface.

When ordering please specify Spectrometer make and model - 220 V or 110 V and country of final destination.

Interface

- 28000** RS 232 connector
28001 USB connector
28002 RS485 connector

Spares and consumables

- 03610** KBr powder (50 g)
19915 4 mm diameter micro cup for Selector™
19916 11 mm diameter standard cup for Selector™
19917 Tilted cup for total reflectance measurements
19918 Abrasive pad sample mount for Selector™
19919 Diabrase abrasive sample pads 12 mm diameter for Selector (100)
19934 Spare ZnSe Window housing for the Environmental Chamber

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