

The Selector™

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



Features

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

Applications

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

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 dia. cup, a micro 4 mm dia. 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

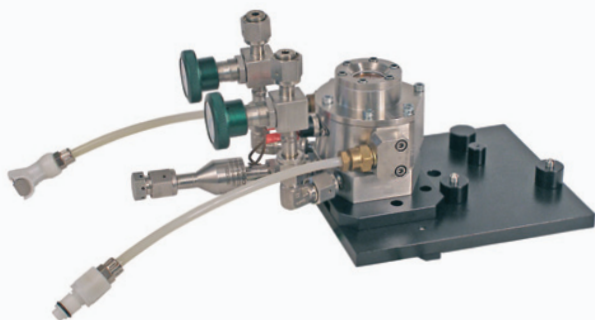
Diabrase pads to allow quick and easy sample preparation of intractable solids.

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. (See next page)

The Environmental Chamber

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



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 co-ordination chemistry.

Ordering Information

GS19900 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 off), 2 mounts for abrasive sample pads, tilted cup for total reflectance measurements

Please specify spectrometer make and model.

GS19930 Environmental Chamber

Includes: High Stability 4000 series Controller with optional computer interface.

Please specify spectrometer make and model make and model - 220 V or 110 V and country of final destination.

Interface options

GS28000 RS 232 connector

GS28001 USB connector

GS28002 RS485 connector

Spares and consumables

GS3610 KBr powder (50g)

GS19915 4 mm diameter micro cup for Selector™

GS19916 11 mm diameter standard cup for Selector™

GS19917 Tilted cup & total reflectance measurements

GS19918 Abrasive pad sample mount for Selector™

GS19919 Diabrase abrasive sample pads 12 mm diameter for Selector (100)

GS19934 Spare ZnSe Window housing for the Environmental Chamber

SPECAC LTD.,
River House, 97 Cray Ave, St. Mary Cray, Orpington,
Kent, BR5 4HE UK
T : +44 (0)1689 873134 F : +44 (0)1689 878527
E : sales@specac.co.uk Registered in England No. 1008689

SPECAC INC.,
50 Sharpe Drive, Cranston, RI 02920 USA
T : Toll Free +1 800 447 2558
E : sales@specac.co.uk W : www.specac.com
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www.specac.com