

Diffuse

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 optimised off axis optics configuration which selectively collects the diffusely reflected components, whilst minimising the specular component.

Various sampling cups are offered including a standard 11mm dia. cup, a micro 4mm dia. cup, and tilted cups. The tilted cups allow for collection of total reflectance, diffuse and specular components.

In addition, an abrasive sampler, 12mm 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 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)



Key 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

Illustrations, descriptions and specifications in this datasheet were correct at the time of going to press. However, Specac's policy is one of continuous product development and we reserve the right to change descriptions and specifications at any time.

For the latest details please contact your local Specac office or representative.

Diffuse

The Environmental Chamber

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

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 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 disc" 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 Selctor Diffuse Reflectance System
Includes: Optical unit with dedicated baseplate, Micro sample cup (4mm dia.), 2 Standard cups (11mm dia.), Diabrase abrasive sample pads (12mm dia.) (20), 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 and country of use

GS28000 RS232 Connection Kit
GS28001 USB Connection Kit
GS28002 RS485 Connection Kit

GS03610 KBr Powder (50g)
GS19915 4mm dia. micro cup
GS19916 11mm dia. standard cup
GS19917 Tilted cup for total reflectance measurements
GS19918 Abrasive pad sample mount
GS19919 Diabrase abrasive sample pads 12mm dia. (100)
GS19934 Spare ZnSe window housing for the Environmental Chamber

Key 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

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