

## COLLECTOR™- Diffuse Reflectance Accessory

*Highest throughput, most expandable accessory  
for the widest range of solid samples*

The COLLECTOR is the most flexible DRIFTS (Diffuse Reflectance Infrared Fourier Transform Spectroscopy) accessory available. It eliminates the need for tedious and time consuming preparation of KBr pellets. Samples can be analyzed neat or by simply mixing with potassium bromide (KBr) or potassium chloride (KCl). Standard capabilities include macro (0.25 gram volume) and micro (0.01 gram volume) sampling. The rugged design of the COLLECTOR makes it an ideal choice for reproducible, high sample throughput in a QC/QA laboratory. The precision optics of the COLLECTOR provide the ultimate energy throughput for nanogram levels of sensitivity for most samples, making it well suited to research environments. A wide variety of controlled environmental chambers are offered as options to permit the analysis of powders (e.g. catalysts) under a range of vacuum, pressure and temperature conditions.

### Patented technology assures optimum results

The optical design of the Collector provides maximum sensitivity for Diffuse Reflectance experiments. For highly reflective samples, the patented BLOCKER® eliminates surface-reflected radiation. Use of the BLOCKER enables production of higher quality spectra and more transmission-like results. For a complete discussion of the Diffuse Reflectance technique, see the Theory section.

### Widest variety of options available

The Si-Carb™ Sampler is a specialized sample preparation tool that is used to abrade intractable samples (such as paint on an automobile panel) and obtain spectra. Diamond abrasive paper is also available.

The Dual Sample Cup Holder is available as an option for the COLLECTOR. This attachment provides the capability to have a

## Applications

- Powders
- Organics
- Inorganics
- Intractable solids
- Reaction monitoring



sample and a blank or two samples loaded at the same time. The BLOCKER device is not used with the Dual Sample Cup Holder. With the use of four different specially designed chambers, the Collector capabilities can be expanded to include temperature and pressure applications (see facing page).

### Product Features

- ◆ Samples can be run neat or easily mixed into a sampling matrix (e.g. KBr)
- ◆ Patented on-axis design with high optical throughput
- ◆ Easy sample cup height adjustment
- ◆ Samples can be run ambient or at elevated temperatures and pressures through the use of chambers
- ◆ The patented BLOCKER device

### Product Advantages

- ▶ Little or no sample preparation needed
- ▶ Sensitivity to nanogram quantities
- ▶ Optimizes sample (beam) focus
- ▶ Wide range of sample types and experiment conditions possible
- ▶ Ensures removal of the specular component (such as with inorganic analyses and QC measurements)

### Ordering Information

PRODUCT NAME	PART NUMBER	DESCRIPTION
COLLECTOR Diffuse Reflectance Accessory	0030-0XX	Includes: Base Optical Unit, Two Macro Sampling Cups, Two Micro Sampling Cups, Alignment Mirror, Funnel and Manual.

#### Options, Supplies and Replacement Parts

Macro Sampling Cup - 13 mm diameter	3000-316	Holds 0.25 grams (KBr)
Micro Sampling Cup - 3 mm diameter	3000-319	Holds 0.01 grams (KBr)
Micro Sampling Funnel	3000-320	
Alignment Mirror	7004-015	
Dual Sample Cup Holder	0030-150	
Mirror Adjustment Tool	2001-106	
Si-Carb Sampler	0030-130	

See page 3-8 for a selection of Diffuse Reflectance supplies.