

EasiDiff

AT A GLANCE

- ▶ Pre-aligned optical components for reproducible, high-quality data
- ▶ Micrometer-controlled sample positioning and focusing
- ▶ High-energy throughput providing nanogram sensitivity
- ▶ Precision slide for repeatable sample introduction and efficient collection of background and sample spectra
- ▶ Unique Sample Preparation and Loading Kit included



The EasiDiff is an economical, high-quality diffuse reflection accessory designed to analyze a wide variety of solid samples. It is often used for analysis of pharmaceuticals, illicit drugs, inorganic solids and minerals, and powdered chemicals.

The EasiDiff reduces the time required to produce an infrared spectrum compared to KBr pellet techniques. Typically, a small amount of sample (about 1%) is mixed with KBr powder and the spectrum is collected.

FAST AND EFFICIENT DESIGN

The EasiDiff employs an elegant, high-performance optical design for maximum energy throughput and ease of operation. Optical components critical to achieving this performance are permanently aligned. Focusing is achieved by bringing the sample (not the collection mirror) to the optimum position with a micrometer. A dual-position sample holder permits background and sample collection in a simple, two-step process.

A special version of the EasiDiff with gold-coated optics for NIR measurements is also available.

SAMPLING CUPS

Two standard sampling cups offer 0.18 and 0.03 cm³ capacities. The required approximate weight of the sample/KBr mixture is 450 mg for the large cup and 80 mg for the small one.

ABRASION KIT

The Abrasion Sampling Kit (optional) consists of a sample collector tool and a set of silicon carbide and diamond disks. Sampling is performed by abrading the surface of the investigated substance with a selected disk. The disk is placed in the accessory and a diffuse reflection spectrum of the material is collected.

The abrasion technique is advantageous when the sample is intractable, too large to bring into the lab, or its shape may prevent the sample from fitting firmly onto the sampling platform of a traditional IR accessory.



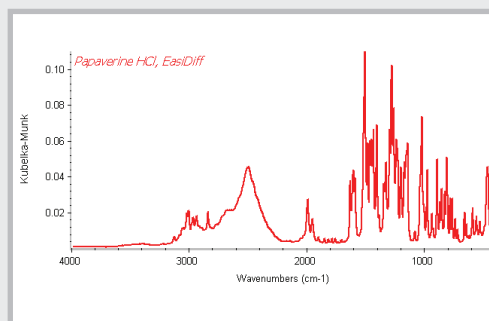
Abrasion Sampling Kit.

SPECIFICATIONS

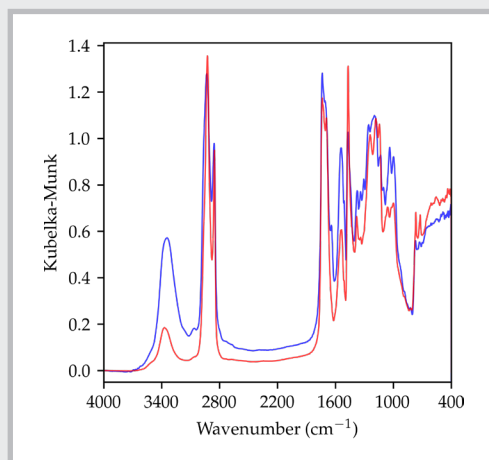
Optical Design	All reflection
Dimensions (W X D X H)	96 x 110 x 154 mm (excluding baseplate)
Sample Focus	Micrometer
Sample Positions	2 positions, slide stops for background and sample
Sample Cup Dimensions	
Micro	6 mm ID x 1.6 mm deep
Macro	10 mm ID x 2.3 mm deep
Sample Cup Volume	
Micro	0.03 cm ³
Macro	0.18 cm ³

APPLICATION

For powders and diffusely scattering solids, diffuse reflection is a convenient infrared sampling technique, and offers high sensitivity. For intractable samples, the abrasion method provides a simple solution for analyzing solids and coatings—example shown below.



Papaverine hydrochloride diluted to 1% in KBr powder.



Polymer spectra of the outer cover of two golf balls brands using the abrasion method.

PART NUMBER	DESCRIPTION
042-10XX	EasiDiff Accessory with Sample Preparation Kit Includes 2 micro sample cups, 2 macro sample cups, EasiPrep Sample Preparation Kit, alignment mirror, 35-mm mortar with pestle and KBr powder (100 g)
042-50XX	EasiDiff Accessory, NIR Version with Gold-Coated Optics Includes 2 micro sample cups, 2 macro sample cups, EasiPrep Sample Preparation Kit, alignment mirror, 35-mm mortar with pestle and KBr powder (100 g)
Note: Replace XX with your spectrometer's Instrument Code listed in the back of the catalog.	
Option	
042-3010	Abrasion Sampling Kit Includes sample collector tool and stainless steel sample post, 25 diamond abrasive disks and 75 silicon carbide abrasive disks
Replacement Parts and Supplies	
042-2010	Micro Sample Cup (2 ea.)
042-2020	Macro Sample Cup (2 ea.)
042-2025	EasiDiff Sample Slide
160-8010	KBr Powder (100 g)
042-3020	Abrasion Disks, silicon carbide (100 ea.)
042-3025	Abrasion Disks, diamond (50 ea.)
042-3030	Sample Cup Holder and Base
042-3040	Sample Preparation Kit
042-3080	Alignment Mirror, aluminum, specular
042-3082	Alignment Mirror, gold, specular
042-3084	Alignment Mirror, gold, diffuse
042-3060	Flat Sample Post
Note: Please contact PIKE Technologies for items not described in this list.	