

Smart Diffuse Reflectance

For Mid-infrared Diffuse Analysis

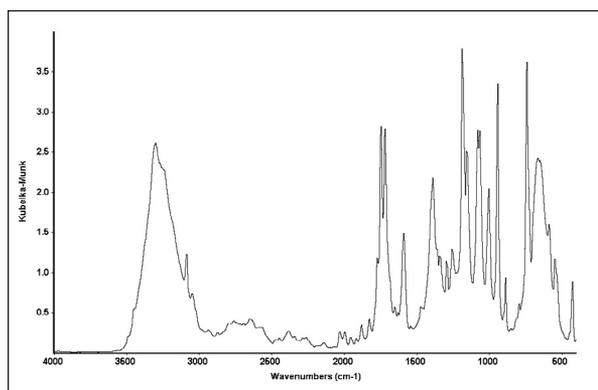
The Thermo Scientific Smart Diffuse Reflectance accessory is highly effective at maximizing diffusely scattered radiation while minimizing specular reflected radiation which is a source of spectral interference. Samples can be analyzed as is, with a slight amount of grinding or by grinding and mixing with potassium bromide (KBr). A wide variety of samples can be analyzed non-destructively.

Example Applications

- Hard and soft powders
- Organic and inorganic materials
- Paint chips
- Inflexible sample that can be abraded with silicon carbide paper

Unique Features

The Smart Diffuse Reflectance accessory comes complete with two sample slides. One holder has two integral sample cups within it. Typically, one of the positions is loaded with the sample and the other is loaded with a reference material, such as KBr. The integral sample cups eliminate the need to worry about easily lost small parts, and are easy to load without the inconvenience of handling small sample cups. If KBr is needed to dilute a sample for analysis, the convenient KBr Powder Packets can be used. Each of the KBr Powder Packets contains a convenient, pre-measured quantity of dry KBr for dispersing a sample.



Ninhydrin 1% in KBr collected using the Smart Diffuse Reflectance

The second holder is intended for use with the Si-Carb measuring system and has an integral gold mirror that can be used as a background reference. This sample slide also has a slot that holds the Si-Carb disk. The Si-Carb kit includes the adhesive-backed silicon carbide paper that is used to abrade the surface to be analyzed, plus a handle and sample plate to hold the paper. This technique transfers a small amount of sample to the disk. An infrared spectrum is obtained of the material clinging to the surface of the silicon carbide disk.



Specifications

Sample Cup Volume: 0.25 gram

Dual Sample Slide Holders: Si-Carb holder and powder sampler holder

KBr Packets: 0.5 gram packets (25)

Silicon Carbide Disks: 320 grit Si-Carb disks (100);
400 grit Si-Carb disks (100)

Ordering Information

| Accessory | Part Number |
|---------------------------|-------------|
| Smart Diffuse Reflectance | 0028-4XX |

XX = 99 for Nicolet™ iS™ 10 and Nicolet x700 XX = 99 for Nicolet Nexus™
XX = 97 for Nicolet 380 and Avatar™