



SurveyIR_{VS}[™] FT-IR Microanalysis Accessory for Bulky Samples

The SurveyIR_{VS} is an infrared (IR) microspectroscopy accessory designed to deliver microanalysis capabilities to the widest range of sample sizes and shapes. The innovative design of SurveyIR_{VS} decouples the stage from the optical microscope. This unique variable stage (VS) implementation permits easy FT-IR microscope analysis of a large range of specimen geometries. The alignment free optical design enables simple accessory installation into virtually any FT-IR spectrometer sample compartment.

Research grade visual images are produced via a high-resolution color video camera. High depth of field viewing optics facilitate quick specimen location and manipulation in reflection and attenuated total reflection (ATR) viewing modes. With a choice of two on-board illumination modes including oblique or reflected light illumination, the SurveyIR_{VS} creates excellent contrast over a wide range of specimen morphologies. Unsurpassed viewing quality through the diamond ATR simplifies target alignment and guarantees excellent sample/ATR coupling, including visualization of sample contact. Simultaneous viewing and data collection allow

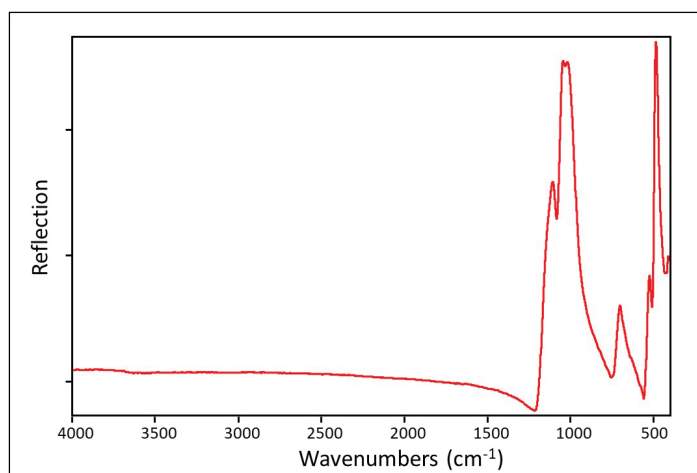
the analyst to visualize and interact with the sample while observing the IR spectrum.

IR performance is leveraged using the on-board FT-IR spectrometer detector in reflection and ATR modes. eSpot[™] software facilitates visual image display, manipulation, capture, documentation, and storage. eSpot also provides the interface for illumination mode selection and remote image mask size by user choice of six sample aperture options.

Gross stage placement is accomplished by a widely variable height and horizontal positioning system with a locking mechanism. Final sample positioning is accomplished with standard manual microscope controls including x, y stage, and coarse/fine focus. The stage is completely removeable for analysis of exceptionally large samples.

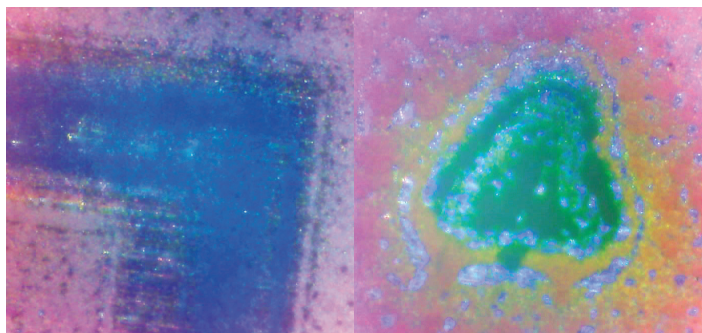


*Inspecting polished granite countertop slab, top –
Specular reflection of white inclusion, bottom.*

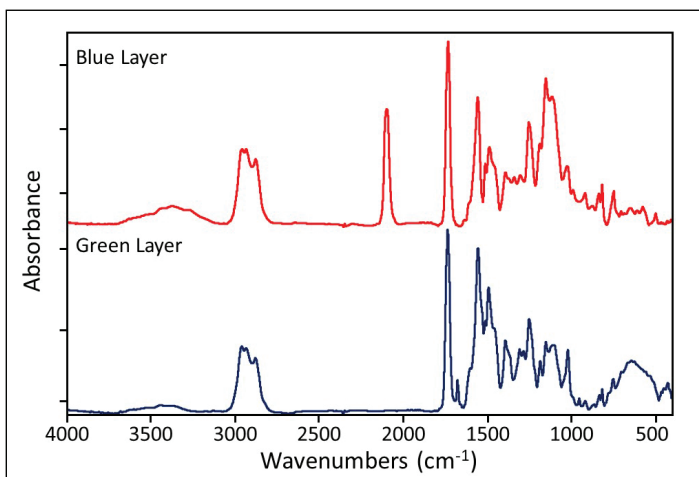


Applications

- Mineralogy
- Art Conservation
- Quality Control
- Archeology
- Aerospace
- Electronics
- Parts Manufacturing
- Criminalistics



Video micrograph of two sections on a commercial aluminum can, top – IR spectra of both sections of the aluminum can showing differences in pigmentation, bottom



Features and Specifications

- User installed in the FT-IR spectrometer sample compartment
- Uses on-board FT-IR spectrometer detector
- Powered by external computer USB 2.0, +5VDC
- 5 mega pixel CMOS color video camera, 2592 x 1944 maximum resolution
- Research grade visual image quality, 1900µm field of view
- Optical magnification yields .7µm/pixel at sample plane
- On-board reflection, oblique, and external flexible LED illumination modes
- IR reflection and diamond attenuated total reflection modes available
- Simultaneous view/IR collection
- Variable fixed diameter IR image mask – 2000, 250, 200, 160, 100, 60 µm – controlled via eSpot software
- eSpot software control of visual illumination mode and intensity, and IR mask selection
- eSpot software control of image capture, storage, and documentation
- eSpot software compatible with Windows™ 7, 8, 8.1, and 10
- Stand height/horizontal adjustment : 12 ½" maximum height adjustment, 14½" side-to-side adjustment, unlimited front-to-back adjustment, 360° rotation
- Manual coarse/fine z stage focus adjust: 2¼" travel
- SurveyIR Optical Unit weight: 5½ lbs.



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