

Diamond EX' Press II

The Diamond EX' Press II is an excellent sample preparation tool for FTIR microanalysis. With this compression cell you can easily flatten and thin the materials to an ideal thickness for transmission analysis. Materials like Hard materials such as minerals, rubbers, plastics, polymers and also pharmaceuticals can be crushed, compressed and flattened to a uniform thickness for IR measurements.

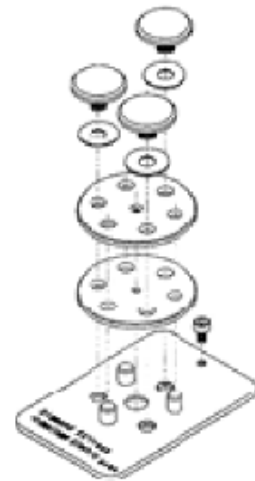


Features:

- Micro Compression Cell used is of low cost but of highest Quality.
 - Design of thumb screw is very simple which ensures equal pressure over the entire working area of the cell. Eliminates sample twisting or shear.
- Ideal for work with microscopes.
 - Minimum Spectral interferences.

Highest Quality and Lowest Cost Micro Compression Cell Available

- Large clear aperture (1.6mm or 2mm)
- Universal use with FTIR-Spectrometers & FTIR-Microscopes
- Two single crystal synthetic diamonds type IIa
- Excellent transmission from UV through Far-IR spectral region
- Easy thumb screw mechanism for application of pressure (max. 10kgf/mm²)
- Standard 2"x3" back plate fits all spectrometers
- Easy to assemble and clean
- To use without beam condenser



Easy Thumb Screw Design

- Ensures equal pressure over the entire working area of the cell
- Thins the sample to a uniform thickness across the measuring area for a maximum throughput to the detector without detection saturation.

- Eliminates sample twisting or shear
- Permits the application of higher pressure than can be applied by single screw design

Ideal for Work with Microscopes

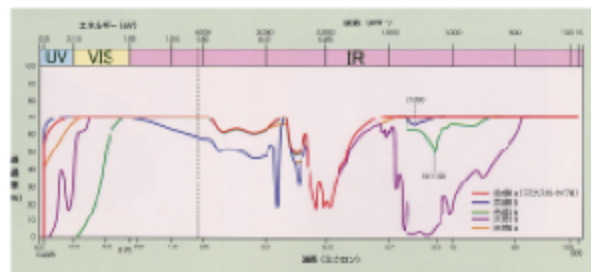
The cell is only 11mm thick at the thickest point and 6mm in the center - this makes it ideal for analysis under the microscope. Due to their strength and hardness, the diamonds used in these cells are relatively thin (1mm). Thus the Diamond EX'Press II has a working distance, which is significantly smaller than other cells. The Diamond EX'Press II works with both 15X and 32X objectives.

Minimum Spectral Interference

The infrared and ultraviolet-visible transmission spectra of synthetic diamonds compares favorably with natural diamonds as shown left.

Please note: The spectra of type IIa synthetic diamonds used in the Diamond EX'Press II Compression Cell (shown in red), compared with the spectra of natural type IIa diamonds used in competing cells (shown in orange). The spectra of these two diamonds are essentially

the same except for the UV-visible region where the natural IIa diamonds tail off at about 225 nm. The other diamond spectra shown are: green -synthetic Ib; purple - natural Ia; blue - synthetic IIb.



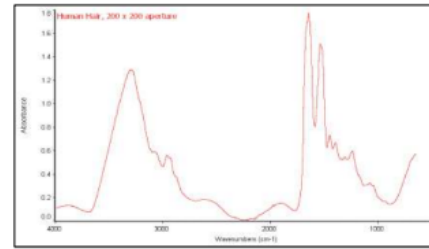
Highest Quality Diamonds:

The Diamond EX'Press II Compression Cell uses two type IIa single crystal synthetic diamonds. Excellent optical transmission and mechanical properties, as well as highly desirable crystalline characteristics, which meet, or exceed those of type IIa natural diamonds:

- Low concentration of nitrogen impurities and crystal defects
- Minimal interfering absorption bands
- Reduced thickness therefore improved throughput
- Greater fracture strength
- No impurities in the diamond to interfere with sample measurements
- High resistance to plastic flow
- No solvent washing necessary

Specifications

Window Size : 2.1mm diameter
Clear Aperture: 1.6mm (2.1mm x 1mm t)
2.0mm (2.8mm x 1mm t)
Cell Dimensions : 76.2mm x 50.8mm x 10mm



Transmission spectra of human hair with Diamond Express II and μ MAX IR microscope

ORDERING INFORMATION

Part Number	Description
STJ-0194	Diamond EXPress II / 2.0mm
STJ-0195	Diamond EXPress II / 1.6mm
STJ-0195DH	Diamond EXPress Replacement Window / 1.6mm
STJ-0194DH	Diamond EXPress Replacement Window/ 2mm
STJ-0194B	Diamond EXPress Baseplate
STJ-0194S	Diamond EXPress Screws (3/set)