

ICRM7000 Image Cutting Raman Micro Analysis System

Leading Solution for one micron analysis for organic materials

1 μ *icron*



n *ano*

ICRM7000 Image Cutting Raman Micro Analysis System



The ICRM 7000 is the fully patented Raman microscope, which is able to cut Raman image of the sample. It will make you analyze one-micron particle using high sensitivity CCD camera. An analysis for the sample size less than one micron is also available with optional accessories.

With its advanced imaging technology, the ICRM7000 can provide you the optimal result for the micron analysis. This particular optic design provides the cut-off capability for the equipment to capture the exact sample image. This capability eliminates unnecessary stray light, so you can concentrate the analysis for the sample.

This technology also reduces the fluorescence matrix effect in analyzing sample. In addition, using the advanced sample stage, ICRM7000 lets you measure a big size sample you choose.

Major Features

■ Unique Image Cutting Technology

Patented image cutting capability lets you get Raman spectra for one-micron organic samples without the delicate sample preparation.

(Option for the sample size less than one micron is also available)

■ Eliminating Stray Light (Need no dark room)

The advanced optical design eliminates the stray light unnecessary to analyze.

It enables you to get high S/N ratio for the one-micron samples regardless of lab room illumination.

■ Long Working Distance

All-reflecting on-axis Long Working Distance Semi-Apochromat objective provides the ultimate result in respect to detectability and throughput.

■ Advanced Optic Design - No need to burn samples

The advanced capability of image cutting technology enables you to project homogeneous - not condensed laser beam to the sample surface less than one-micron.

It also reduces fluorescence matrix effect. In consequence, the patented optic design will free you from the chronic problem of burning sample.

■ Multi-Depth Analysis

By setting the focusing point of the laser beam for different depth, you will be able to conduct multi-depth quantitative analysis.

■ Removable Sample Stage

By removing the sample stage, you can measure for both small-sized and bulk-sized sample.

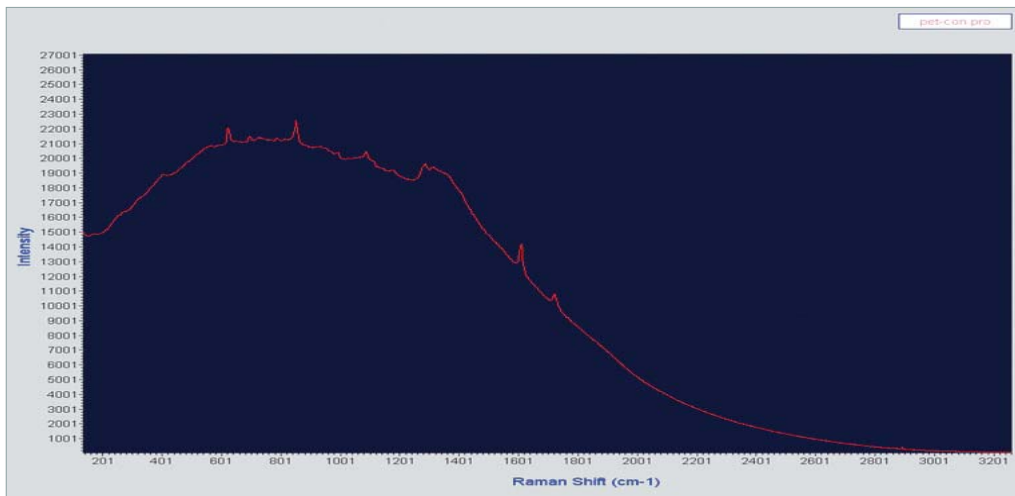


Effect of Image Cutting Technology

Example 1 : Raman spectra for the conventional Raman microscope and Image Cutting Raman Microscope (ICRM)

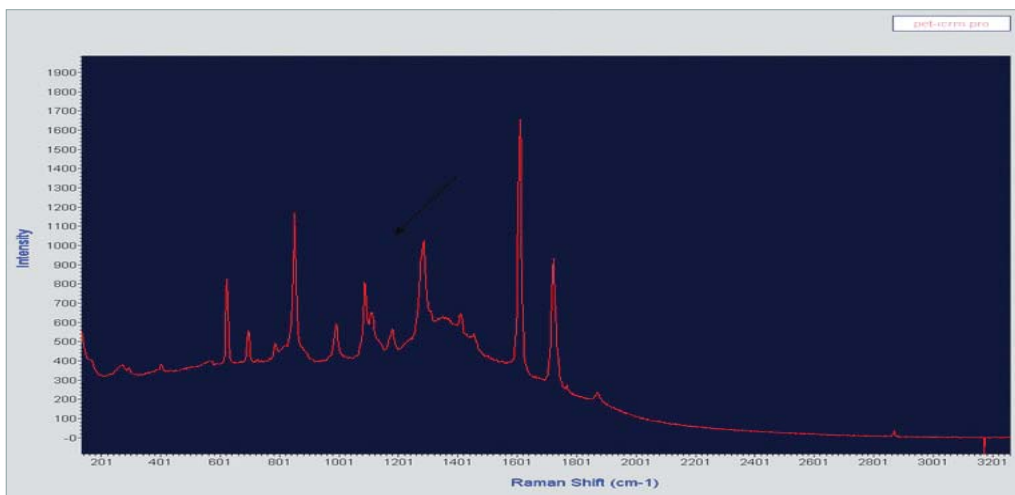
Sample : Polyethylene Terephthalate (PET) Film (Laser source: 785nm)

With Conventional Raman Microscope



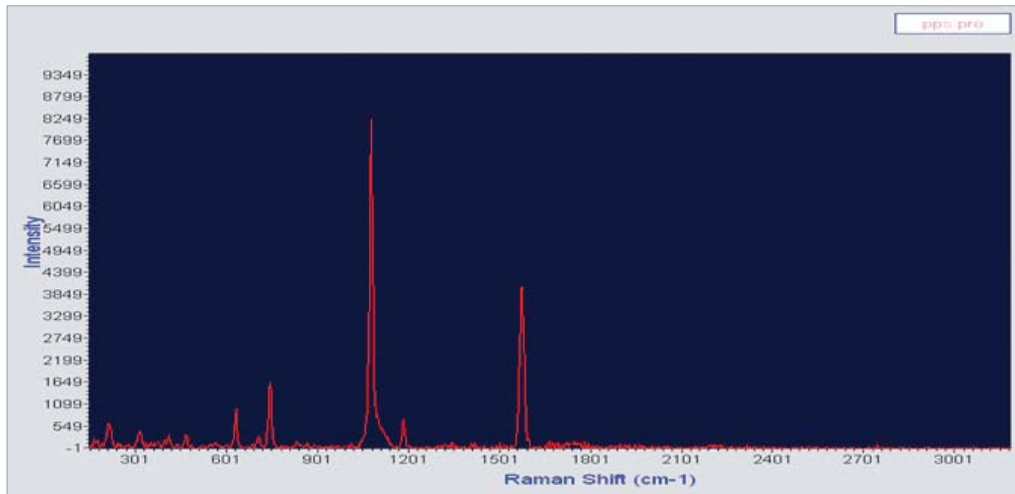
High baseline is displayed - Fluorescence effect

With Image Cutting Raman Microscope (ICRM)



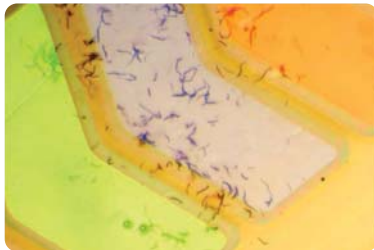
Low baseline is displayed - Fluorescence effect is reduced

Example 2 : Analysis of one micron Polyphenylenesulfide (PPS) between slide glasses
(Laser source: 785 nm, Sample size: 1 micron)



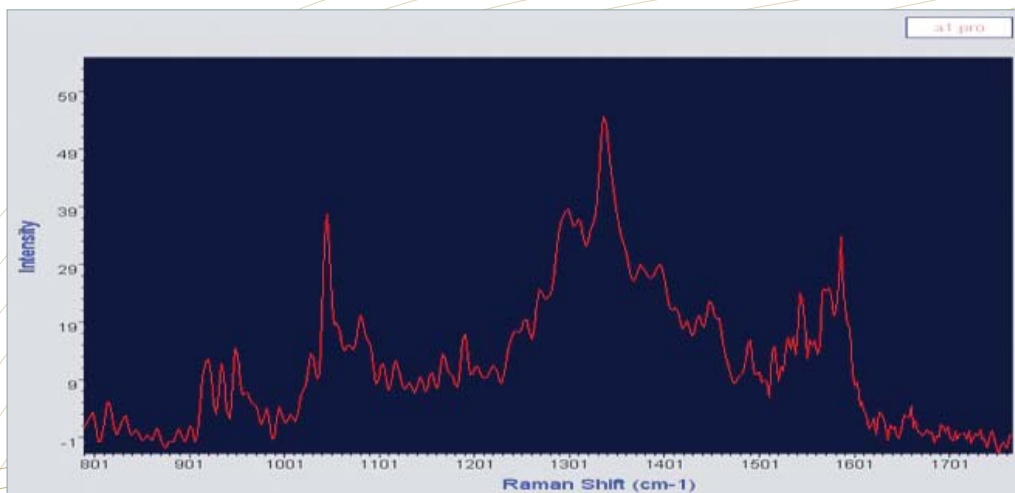
Very High Signal to Noise (Number of scans : 2 scans)

Example 3 : Micron size particles in LCD panel



Laser source: 785 nm

The width of impurity: less than 1 micron

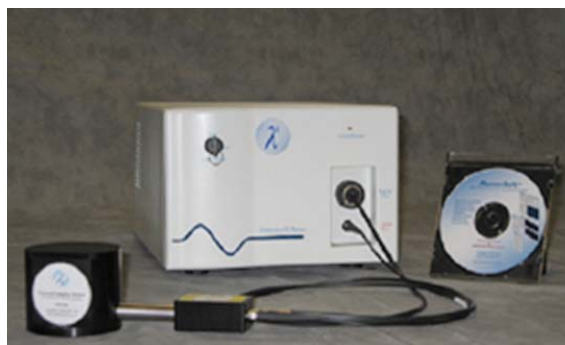


The pattern of Raman spectra: Affected by the Cellulose particles produced by fungi

Ultra High Performance Dispersive Raman Spectrometer



LSI Dimension P1 XL



LSI Dimension P2 XL

Features :

- New All systems available in Ultra-High sensitivity with extraordinary Signal to Noise
- New TE cooled, power adjustable lasers
- High efficiency Vector Raman Probe™, customized working distances
- New Single and Multiplex Probe systems, unique fiber bundle & coupling
- New Flow through Raman Systems for the Dimension-P1
- Versatility with Sampling Modules and Micro Raman Adaptors
- New Laser attenuation systems for low power applications
- LSI RamanSoft 2.0 for 21 CFR Part11 applications



Benefits :

- Customizable spectrograph design
- Wide choice of Princeton Instrument CCD's
- Automated Real Time Peak Analysis Modules
- LSI's unique background removal algorithm
- Real-time process/reaction monitoring to 10 ms
- Integration w/ GRAMS IQ Predict™ & Spectral ID®
- High performance systems that are easy to use

