

# RamanMicro 200

Dispersive Raman Microscope



Focus on what  
you need... Results

# Faster, simpler

## spectroscopy and chemical imaging

RamanMicro 200 – an affordable dispersive Raman microscopy system that makes routine sample analysis and chemical imaging accessible to any laboratory.

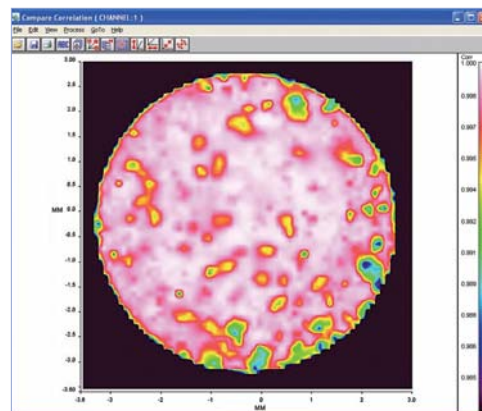
### Results in seconds

Unlike most Raman microscopes, the RamanMicro™ 200 is permanently aligned and ready to use so you can focus on your results. Simply switch on and capture the information you need in seconds without need for manual adjustments. With both manual and motorized sampling stations, the RamanMicro 200 can accommodate a wide range of sample types and allows you to get detailed spectral analysis or chemical images quickly and easily.

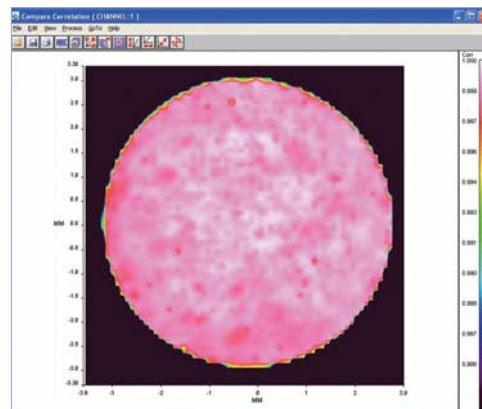
## Experience the power of Raman microscopy

Raman microscopy enables detailed molecular spectroscopy analysis and chemical imaging within the interior of a sample using an interface that is convenient and familiar to all laboratories – the microscope. It enables noncontact analysis and provides richly detailed spectra with no sample preparation.

Raman is the most widely applicable technique for material characterization. Typical applications are microscopic material characterization, pharmaceutical analysis, forensic identification, medical and academic research.



Chemical image of a poorly blended pharmaceutical tablet.



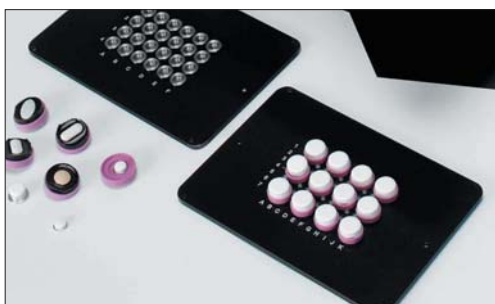
Chemical image of a correctly blended pharmaceutical tablet.

# Maximum sampling versatility

A wide range of sampling stages allows you to analyze almost any sample type.

## Choose manual or motorized sample stages

Both manual and motorized stages can handle slide-based samples, while the motorized stage comes in standard and large formats to accommodate a variety of accessories such as tablet and powder holders, multi-well plates and hot cells.



The same convenient tablet and powder kits, sample holders and accessories are used by both the RamanMicro 200 and PerkinElmer's Spotlight™ FT-IR Microscope.

## Add a Raman probe for outstanding flexibility

The RamanMicro 200F includes a fiber optic probe that adds remote sampling, 'point and identify', bulk sample analysis and reaction monitoring to the RamanMicro 200 functionality. Software control allows for a quick switch between probe and microscope without the need for manual intervention.

Probes for:

- Hand-held/non-contact
- Liquid immersion
- Reaction monitoring
- Pilot production
- Elevated temperature and pressure analysis (3000 psi and 500 °C)



Fiber optic probe performing sample identification through large amber bottle.

## Fast and easy assisted sample visualization and spectrum acquisition

A video alignment camera is featured for sample visualization. It assists with sample positioning and focusing, particularly useful when analyzing small or non-homogenous samples.

The Visible Image Survey provides a large field of view when using a motorized stage. It raster-scans the sample giving a much larger image than the camera's field of view. Raman maps or line scans can be overlaid onto this visible image.

# Advanced and intuitive software for simple, automated data acquisition and analysis

The RamanMicro 200 uses PerkinElmer® Spectrum™ software\* for data acquisition and as a processing interface. This intuitive package includes all the required data manipulation algorithms as well as many novel automated features. Spectral library searching and library building software are provided, with access to a wide range of libraries.

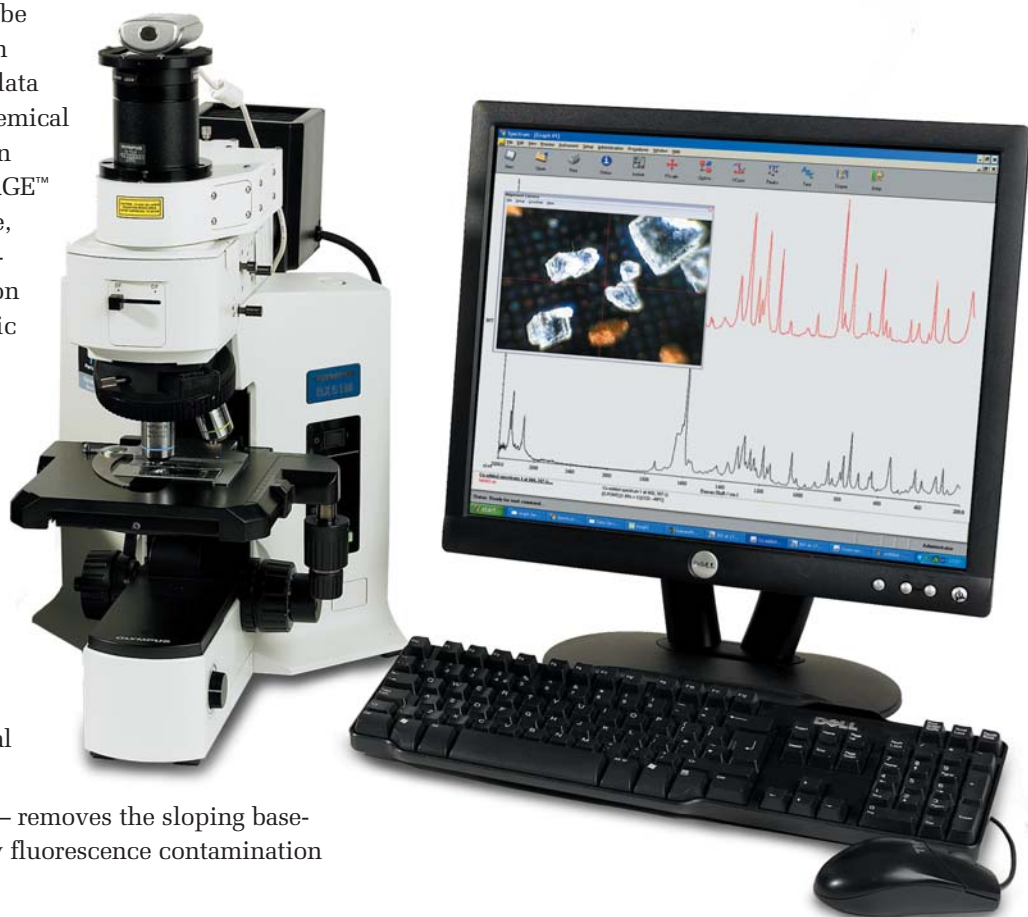
Quantitative analysis can be performed using Spectrum QUANT+™ chemometrics data processing interface and chemical images can be generated in seconds with SpectrumIMAGE™ chemical imaging interface, using peak intensity, chemi-map, COMPARE™ correlation or quantitative chemometric models.

## Automate your data acquisition and processing

- Auto exposure time calculated – simply type in the total analysis time
- Auto spectral subtract – removes spectral contributions from host material in real time
- Auto baseline correction – removes the sloping baseline sometimes caused by fluorescence contamination of Raman spectra
- Auto photobleaching – for significantly improved spectral quality even in samples that would otherwise yield low quality data

## Push-button chemical mapping

Using a motorized stage, the sample can be point mapped. The unique Show Structure function automates chemometric analysis on a spectral map by identifying the individual chemical constituents. By applying a colorimetric intensity to each constituent, the sample's chemical distribution can be visualized.



\*Common across PerkinElmer's Raman, FT-IR and NIR product lines

# Non-destructive sample analysis and identification

Every compound has its own unique Raman spectrum, providing a virtual fingerprint for identification. Identifying, characterizing and investigating the structures of a wide range of material types are easier than ever using the RamanMicro 200. When it comes to non-destructive sample analysis and identification Raman spectroscopy is second-to-none, but traditional spectrometers are typically complex instruments requiring constant realignment and are difficult to use. The RamanStation™ dispersive Raman system from PerkinElmer combines this great ease of sampling with unparalleled ease-of-use. The RamanMicro 200 is equipped with a range of novel technologies such as fluorescence removal, automated spectral subtraction and automated generation of chemical images. Our broad range of spectral libraries allows for rapid sample identification at the click of a button.

## The RamanMicro 200

- **Affordable entry-level system:** Accessible for any laboratory
- **Ideal for routine sample identification and analysis** and more advanced analyses such as chemical imaging
- **Permanently aligned and ready to use:** No user adjustment required
- **Completely automated, easy-to-use system:** Requires minimal hands-on time
- **Manual and motorized sampling stages:** Accommodates a wide range of sampling types
- **Video camera alignment:** Fast and easy sample visualization and spectrum acquisition
- **Visible image survey:** Displays an image much larger than the camera field of view
- **Powerful built-in software:** Simple and complete data acquisition and processing, chemical imaging and mapping
- **785 nm laser:** The optimum wavelength for Raman with minimal fluorescence interference
- **10–250 micron spot size:** For micro and macro sampling
- **Optional software selectable fiber optic probe:** Ideal for remote sampling and reaction monitoring

# PerkinElmer: Exceeding expectations for over 60 years

PerkinElmer manufactures and supports the broadest range of instruments, reagents, and consumables in the industry – giving us unparalleled knowledge and depth of expertise. With over 60 years of experience, PerkinElmer is a company you can count on to be there when you need us. We have the largest and most experienced service force in the industry.

Our 1,200 factory-trained and certified engineers have an average of 15 years of experience maintaining leading-edge scientific equipment including preventative maintenance, validation support, and instrument repair, along with the training and technical support you have come to rely upon.

We provide the skills and capabilities to deliver solutions that enable laboratories like yours to be more productive and efficient. Our solutions are customized to meet your individual needs, and can address issues ranging from asset management to technical training of your personnel to equipment moves. We also provide solutions for multi-vendor environments, including preventative maintenance, validation, repair and compliance.

Working with you, we'll make sure that your laboratory achieves its goals.

That's precisely our business.

## The RamanMicro 200 advantage

- Completely automated and permanently aligned – requires no manual adjustments
- Manual and motorized sampling stages – accommodates a wide range of sample types
- 785 nm laser – for minimal fluorescence interference
- Powerful built-in software – simple and complete data acquisition and processing, chemical imaging and mapping
- Video alignment camera – fast and easy sample visualization and spectrum acquisition

## The Spectrum Spotlight 200 advantage

See also the Spectrum Spotlight™ 200 FT-IR Microscopy System that offers:

- Exclusive high performance, high sensitivity MCT detector
- Automated sample positioning, focus and sample apertures
- White light LED visible illumination
- Fully upgradeable to FT-IR imaging

See the Spectrum Spotlight 200 Product Note for more information.



Figure on front cover. RamanMicro 200 with large motorized stage and joystick. SpectrumIMAGE software is shown displaying a chemical image and a spectrum from within the image.

For a complete listing of our global offices, visit [www.perkinelmer.com/lasoffices](http://www.perkinelmer.com/lasoffices)

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