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SPECTROSCOPY CORP

mIRage®-Raman microscope

Automated Raman today. Multimodal Spectroscopy tomorrow.

- High-performance Raman spectra and imaging for a wide range of applications.
- Sub-500nm resolution with access to a range of objectives and options to best fit experimental needs on a motorized, fully software-controlled turret.
- Compatible with featurefindIR™ – for particle detection, selection, and automated measurement workflows.
- Compatible with industry-wide Raman spectral libraries
- Applications include Pharmaceutical particulates, microplastics, life sciences, , polymers and materials science.
- Multiple laser configurations available.
- 21 CFR PART 11 software option supports regulatory compliance.

mIRage®-Raman

Built for today's automated spectroscopy workflows. Ready for future multimodal spectroscopy

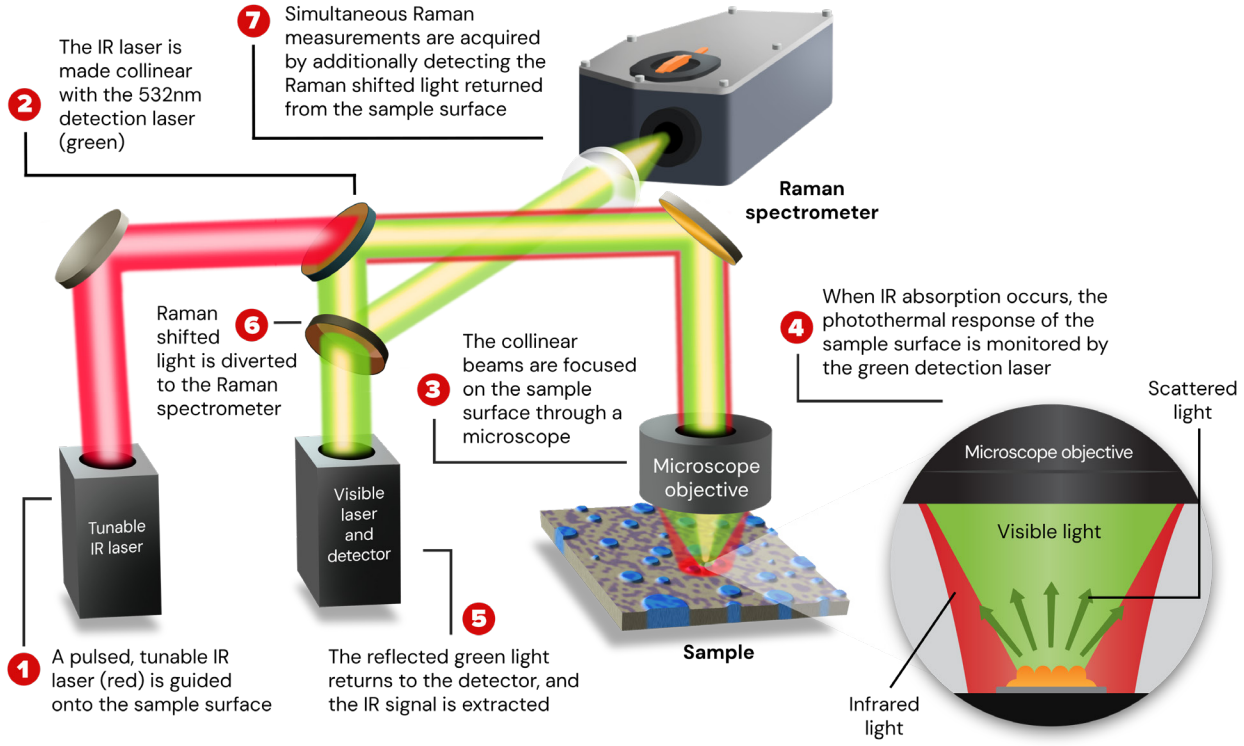
The mIRage-Raman platform is a dedicated, high-performance Raman microscope built for researchers who need the power of Raman spectroscopy today, with the flexibility to expand into multimodal capabilities in the future, including sub-micron O-PTIR and fluorescence microscopy.

Designed on the proven mIRage optical microscopy platform, it delivers high-quality Raman spectra and imaging across a wide range of applications including, pharmaceuticals, life sciences, microplastics, materials, and polymers. Capabilities such as featurefindIR™ enable efficient particle detection, selection, and automated measurement workflows.

Importantly, the mIRage-Raman shares the same platform, accessories, and workflow as the full mIRage system, ensuring a seamless path to upgrade when infrared spectroscopy becomes a requirement.

By investing in the mIRage-Raman, laboratories gain a high performance Raman solution today, knowing that expansion into submicron IR (O-PTIR) for simultaneous submicron IR and Raman and/or widefield epi fluorescence imaging is easily possible in the lab.

From Raman to Simultaneous Raman+submicron IR: Same Spot. Same Time. Same Resolution.



How it works: Simultaneous submicron IR+Raman

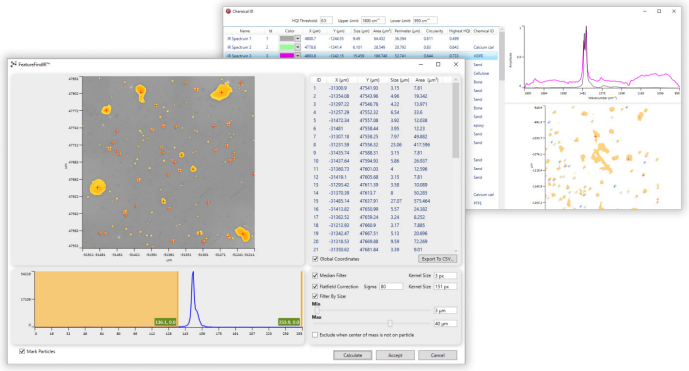
Future-proof your investment with O-PTIR upgrade

When your research requires complimentary submicron infrared spectroscopy, the mIRage-Raman platform can be seamlessly upgraded to O-PTIR.

- Continue using your Raman workflows and data while adding the unique capabilities of O-PTIR (submicron IR spectroscopy, no scattering artifacts, FTIR-database compatible spectra).
- Shared accessories and features: co-located fluorescence, and sample stages including featurefindIR™ and micro-ChemID.
- One platform, two powerful techniques – eliminating the need for separate Raman and IR instruments.

featurefindIR™ – Detect, Select, Measure

- Automatically measure Raman spectra for hundreds and thousands of particles using featurefindIR.
- Optional micro-ChemID provides support for Raman spectra and allows for user-created Raman libraries.
- Exports as needed to KNOWITAL and other industry standard Raman spectral libraries.

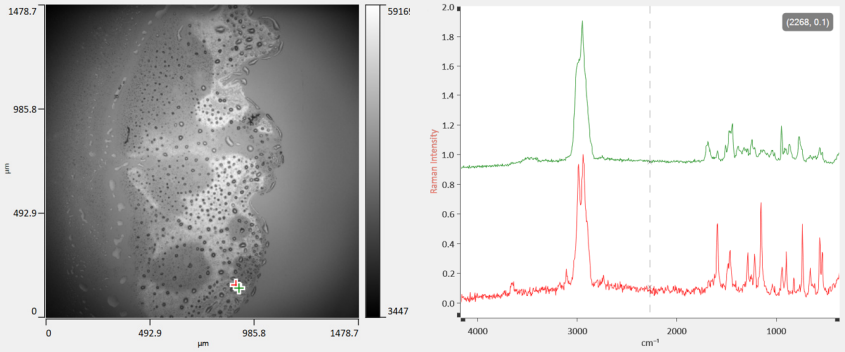


Automatically measure the chemical ID 100's of small particulates

Wide range of applications

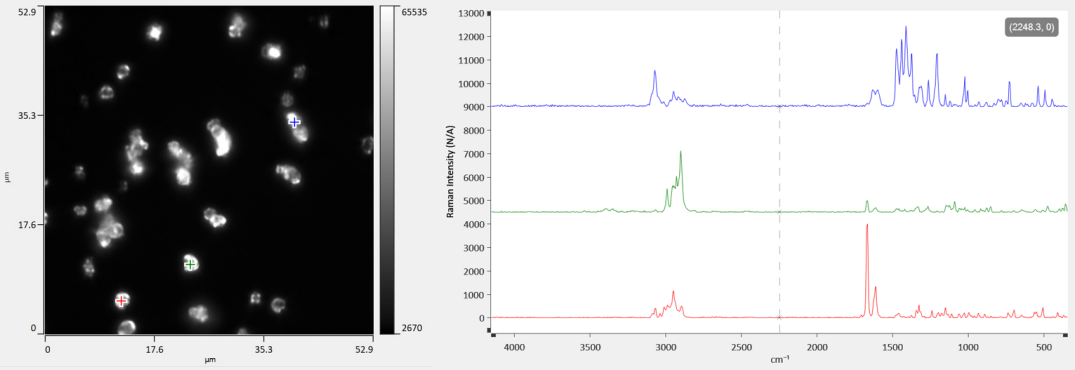
mIRage-Raman provides unique Raman and spectroscopy data for numerous material types and research areas, including:

Pharmaceutical particulates



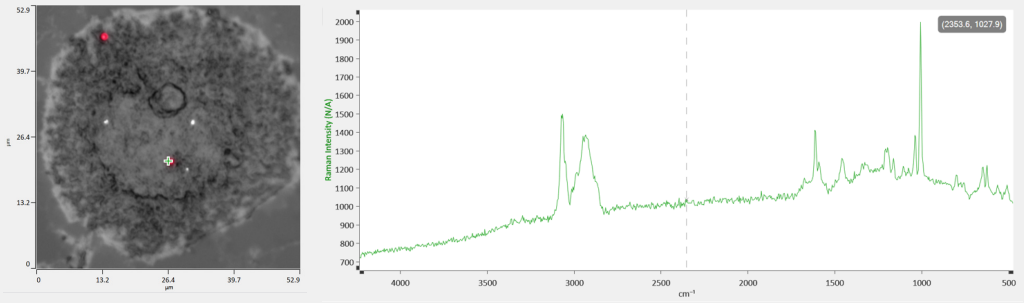
Amorphous Solid Dispersion (ASD). Brightfield image and Raman spectra.

Orally inhaled and nasal drugs



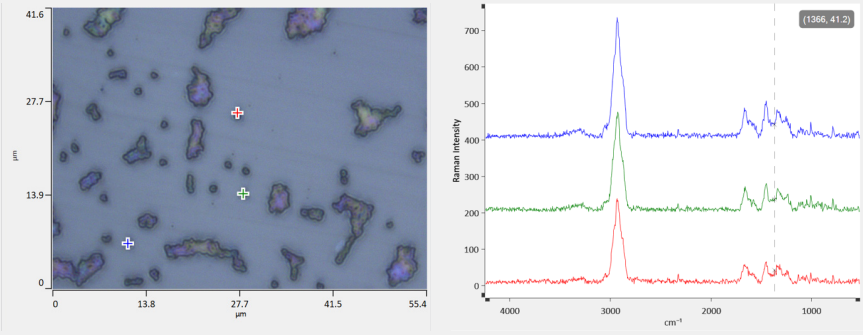
Cross-polarizer image and Raman spectra of APIs and excipients.

Particulates in cells and tissues



Brightfield image and Raman spectra of FL labelled PS beads (1um) in cells (dried).

Life science and biologics



Brightfield image and Raman spectra of single cell bacteria.

Product specification overview

Spectral Range and resolution **532nm Excitation**	• 532nm laser with 600 l/mm 500nm blaze grating spectrometer • Raman spectral range approximately 3800-200 cm^{-1} • Four position automated grating turret • Average resolution is typically 4 cm^{-1} • 532nm laser with optional 1200 l/mm 500nm blaze grating enables higher spectral resolution of approx. 2 cm^{-1} with corresponding reduction in spectral range of approximately 2000 cm^{-1}. Range will reduce when working at higher wavenumbers.
Spectral Range and resolution **785nm Excitation**	• 785nm laser with 300 l/mm 1200nm blaze grating • Raman spectral range approximately 3350-350 cm^{-1} • Four position automated grating turret • Average resolution is typically 4 cm^{-1} • 785nm laser with optional 600 l/mm 1000nm blaze grating enables higher spectral resolution of approx. 2 cm^{-1} with corresponding reduction in spectral range of approximately 2000 cm^{-1}. Range will reduce when working at higher wavenumbers.
Dual 532 and 785nm laser **Options**	• System provides for dual laser configuration, with user capability to switch between the 2 laser options for optimum raman performance. • Additional optional laser excitation wavelengths are available.

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For full references to the data highlighted in this document, please refer to our website.

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