Confocal Micro-Raman System

## WITec alpha300 *access*

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# WITec alpha300 access

The alpha300 access is a high-quality confocal micro-Raman system that provides a new point of entry to WITec's leading-edge throughput and sensitivity for sub-micrometer chemical analysis.

> The new access microscope enables single-spot analysis or Raman mapping while delivering exceptional spectral quality. Specifically engineered for budget-conscious customers requiring superior performance, optical throughput and spectroscopic capabilities, it is an ideal access point to WITec's Raman microscopy know-how. Featuring well-established WITec optical components, the system provides uncompromising cutting-edge capabilities. As a member of the alpha300 microscope series it offers full upgradeability to confocal 3D Raman imaging (FAST RAMAN IMAGING<sup>®</sup>), Atomic Force Microscopy or Scanning Near-field Optical Microscopy, along with the modularity to keep pace with emerging and future challenges.

- access to class-leading capability within challenging budget and procurement environments
- access to high-performance spectral Raman mapping
- access to exceptional spectral quality provided by the WITec UHTS Raman spectrometer series
- access to high-quality and ultra-precise optical microscopy components
- access to WITec Raman and imaging know-how
- access to the future of Raman spectroscopy through upgradeability

... adaptable (single or multi-laser coupling units) for maximum experimental flexibility.

... with LED Koehler white-light illumination and video camera sample view. (Dark field microscopy optional)

## HIGH-OUALITY, ROCK-SOLID MICROSCOPE BASE

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The lens-based, excitation wavelength-optimized spectrometers of the UHTS series allow more than 70% transmission for high speed and high resolution Raman imaging. The UHTS 300 VIS – NIR spectrometer system is ideally suited for multiple laser configurations between 532 nm and 830 nm and offers advanced spectral quality for demanding requirements. Other spectrometer configurations are available upon request.

## alpha300 access Applications



Large-area Raman map (A) of a pharmaceutical pain relief ointment (emulsion) and corresponding spectra of oil and water with the dissolved active ingredient (B).



## MULTIPLE LASER EXCITATION SOURCES

## **RESEARCH-GRADE OPTICAL MICROSCOPE BODY**

#### MANUAL MICROSCOPY STAGE

... for highly accurate single-point spectral acquisition.

#### **MOTORIZED MICROSCOPY STAGE** (optional)

... to allow for high-resolution confocal Raman mapping and large-area investigations.

... for the highest stability and long-term drift reduction.

#### SPECTROSCOPY SYSTEM UHTS 300 VIS - NIR

Raman analysis of a graphene flake: (C) White light video image indicating the positions of single micro-Raman spectra acquisitions as shown in (D) with corresponding colors. The Raman image in (E) reveals its layered structure based on the recorded Raman map.





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