

uRaman™

ultimate Versatility & Affordability
with Research-Grade Sensitivity

The ideal Spectroscopy Solutions to enhance your scientific capabilities



Features

- Affordable
- Small footprint
- Research-grade sensitivity
- Raman chemical mapping options available
- User controllable laser power
- Small focus spot size <math><1\mu\text{m}</math>
- Nikon Ci-L Research-grade upright microscope
- Available in various wavelengths

** Applications : Ideal for SERS, Pharmaceutical, Agriculture, Biomedical, Semiconductor, Gemology, etc

uRaman-Ci Series

The uRaman-Ci is a complete Raman Microscopy System that consists of the uRaman module being integrated with the Nikon Ci-L research grade upright microscope. The uRaman-Ci is capable of performing transmitted Brightfield Imaging with other add on such as Reflected Brightfield, Darkfield, DIC and Fluorescence imaging modes available.

We also have a full range of Nikon Objective Lens and accessories such as cuvette holder for measuring liquid samples for you to choose from.

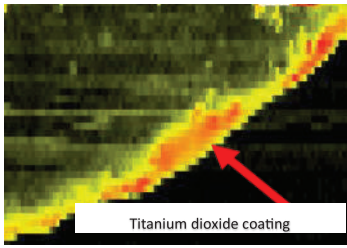
In addition, uRaman-Ci can also equipped with a XY Motorized Stage and uSoft Map Software for Raman Chemical Mapping.



uRaman modules
(785nm Non-Cooled & 532nm Cooled)
Integrated with NIKON Ci Upright Microscope

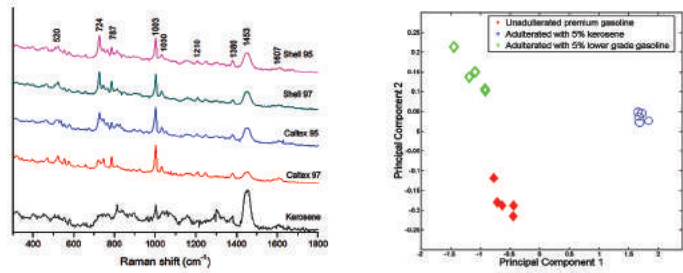
APPLICATIONS

2D Raman Chemical Mapping



Mapping of the pharmaceutical tablet revealing the external titanium dioxide coating

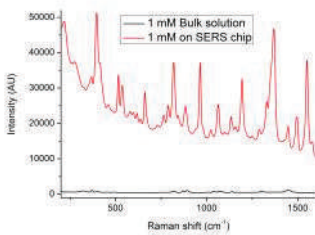
Adulteration detection



Raman spectroscopy coupled with Chemometrics help to detect petrol adulteration with kerosene or lower grade petrol.

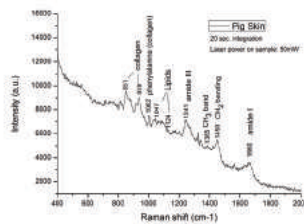
KM Tan et al., Analytical Chemistry, 2013, 85(3), pp1846-1851

Surface Enhanced Raman Scattering (SERS)



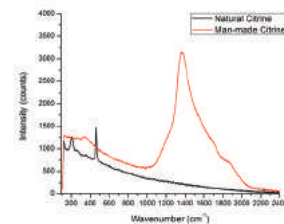
SERS enhancement of weak Raman signal by 10^6 times is very useful in applications involving low concentration detection.

Biological



Raman spectroscopy of skin sample with the uRaman-785-Ci reveals wealth of information.

Gemology



Raman spectroscopy provides information on minerals content as well as to detect counterfeit gems.



uRaman Module

| | | | |
|----------------------|---|----------|----------|
| Laser | 532 nm | 633 nm | 785 nm |
| Laser Type | Single Mode Frequency-Stabilized | | |
| Laser Power | 70 mW | 70 mW | 100 mW |
| Laser FWHM Bandwidth | ~100 MHz | ~150 MHz | ~105 MHz |
| Detector | Cooled and Non-Cooled 2048 pixel CCD array | | |
| Spectral Resolution | 4-12 cm^{-1} | | |
| Spectral Range | 100-2400 cm^{-1} / 100-3600 cm^{-1} | | |
| Integration Time | 2 ms to 10 mins | | |
| Software | uSoft or uSoft-Map | | |
| Power Supply | 5 Vdc | | |
| Dimensions | Length x Breadth x Height 30 x 31 x 6.5 (cm) | | |

Microscope

| | |
|---------------------|---|
| CI-L | |
| Optical System | With Infinity Correction Optical System |
| Eyepiece | Field Of View 22mm |
| Focusing | Coaxial Coarse/Fine with Min 0.1mm/Focusing stroke 30mm |
| Tubes | Trinocular Tube (100/0, 0/100) |
| Nosepieces | Sextuple Nosepiece |
| Stages | Manual Right handle Stage with 2 Sample Holder, travel range 78mmx54mm |
| Condenser | Abbe NA 0.9 |
| Observation methods | Brightfield, and option for Epi-fluorescence, Darkfield, Phase Contrast, Polarization |
| Power Consumption | 6W LED (Brightfield configuration) |
| Weight | Approximately 14kg and below |

Contact us for free sample evaluation today!