

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.



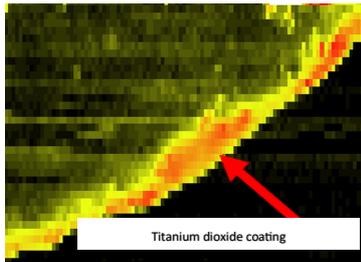
uRaman modules
(785nm Non-Cooled & 532nm Cooled)
Integrated with NIKON Ci Upright Microscope

Technospex
www.technospex.com

TechnoSpex Pte Ltd
1092 Lower Delta Road #04-01 Singapore 169203
Tel : +65-6276 6928 | Fax : +65-6276 1558
Email : sales@technospex.com | www.technospex.com

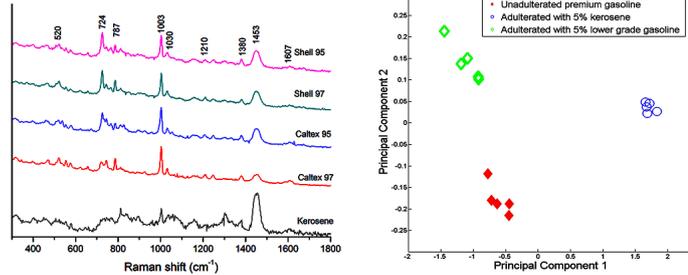
APPLICATIONS

2D Raman chemical mapping



Mapping of the pharmaceutical tablet revealing the external titanium dioxide coating

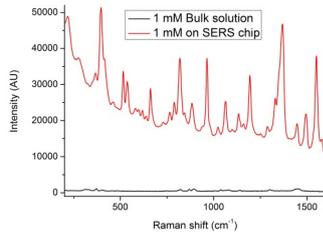
Adulteration detection



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

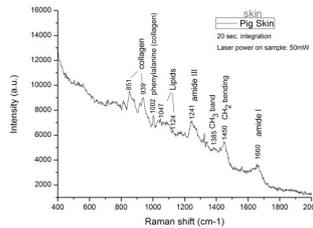
KM Tan et al., Analytical Chemistry, 2013, 85(3), pp1846-1851

Surface Enhanced Raman Scattering



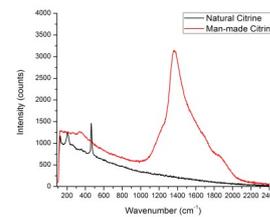
SERS enhancement of weak Raman signal by 10^6 times is very useful in applications involving low concentration detection.

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	100 mW	70 mW	100 mW
Laser FWHM Bandwidth	~100 MHz	~150 MHz	~105 MHz
Detector	Cooled and Non-Cooled 2048 pixel CCD array		
Spectral Range / Resolution	95 or 200 - 5400 @ 10cm ⁻¹	80 or 160 - 3800 @ 7cm ⁻¹	80 or 150 - 3600 @ 8cm ⁻¹
	95 or 200 - 3400 @ 7cm ⁻¹		80 or 150 - 2400 @ 4.5cm ⁻¹
	95 or 200 - 1900 @ 5cm ⁻¹		80 or 150 - 2400 @ 9cm ⁻¹
Integration Time	2 ms to 120 secs		
Software	uSoft or uSoft-Map		
Power Supply	12 Vdc	5 Vdc	5 Vdc
Dimensions	Length x Breadth x Height 30 x 31 x 6.5 (cm)		

Specification

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,
Power Consumption	6W LED (Brightfield configuration)
Weight	Approximately 14kg and below

Contact us for free sample evaluation today!

Technospex

Decades Experience + Tomorrow's Technology

Technospex Pte Ltd

1092 Lower Delta Road #04-01 Singapore 169203

Tel : +65-6276 6928 | Fax : +65-6276 1558

Email : sales@technospex.com | www.technospex.com