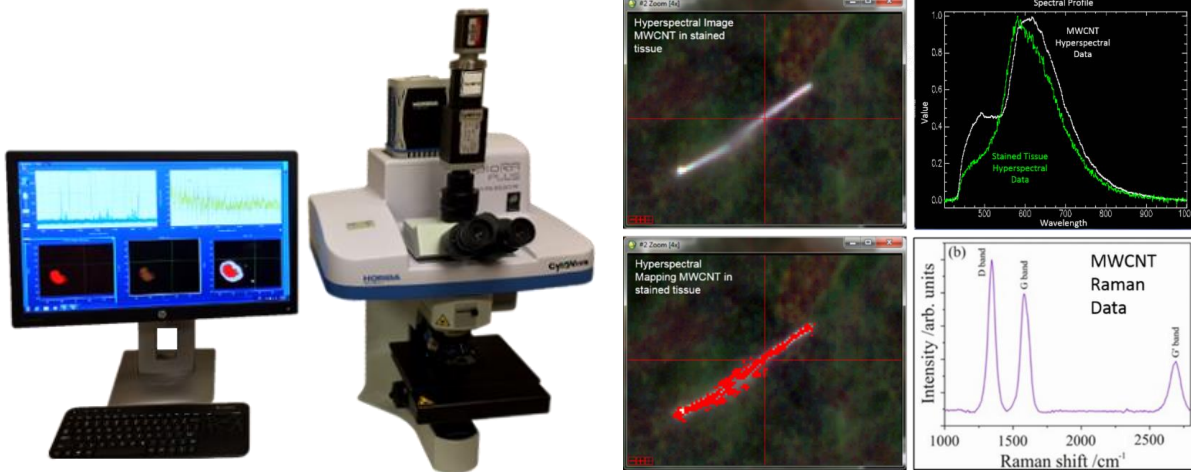


Integrated Raman and Hyperspectral Microscopy Now Available



In collaboration with HORIBA Scientific, CytoViva now provides confocal Raman imaging integrated on the same microscope platform as its enhanced darkfield and hyperspectral imaging system. This integrated solution meets a critical need for nanotechnology researchers in that it combines the benefit of high spatial and spectral resolution, enhanced darkfield hyperspectral imaging and the quantitative molecular analysis provided by Raman.

This integrated microscope package leverages the proven XploRA Plus Raman microscope from HORIBA Scientific. The system provides for full confocal Raman imaging and the ability to select from single or multiple laser illumination options, including 532nm, 638nm or 785nm. The integrated imaging spectrometer includes four gratings mounted on a motorized turret for full resolution, range and coverage (gratings are 600, 1,200, 1,800, 2,400 gr/mm). Acquisition and analysis is conducted with the user friendly LabSpec6 software package. The KnowItAll Horiba Raman library search software is also available with this technology.

The application example above demonstrates how this combined capability can effectively support nanotechnology research. It shows a CytoViva Enhanced Darkfield Hyperspectral image of stained tissue with internalized multi-walled carbon nanotubes (MWCNT) in the top left image of the example. This high spatial and spectral resolution image was captured in less than one minute. To the right of this image is representative hyperspectral data measurements of the MWCNT and the stained tissue taken from pixels in the image. The bottom left image demonstrates hyperspectral mapping of the MWCNT in the tissue. Finally, the bottom right image demonstrates an example of the Raman signal captured from the MWCNT.

Using the XploRA, Raman spectra of selected sample areas in the identical field of view can be captured as a single shot, in a line across the field of view, or in a full Raman map. This allows for cross correlation of the Raman spectra with the CytoViva hyperspectral data and mapping, insuring accuracy of the analysis.

Because of the large sample areas that can be covered with this system, it can significantly improve the efficiency of your research efforts. Sample imaging volumes that can be conducted in a single day with this technique would potentially take weeks with other quantitative techniques such as EDX SEM.

Please contact us at info@cytoviva.com to learn more about this integrated microscope package or to arrange a demonstration with your samples.