

Monday
March 9, 2015

DAY 1

New Orleans • FREE

Lab Industry News

An independent publication not affiliated with any other organization

BioTools Presents “Next Generation” Innovations in Microscopy and Vibrational Spectroscopy

The correct spectrum matters... and because the correct spectrum matters, BioTools' arsenal of instruments and complementary software are designed to translate superb vibrational spectroscopy science into high value data.

Taking Conventional FT-IR and Raman One Step Further

BioTools now features three areas of specialty. The first is the analysis of chiral molecules: those “left/right” mirror image marvels of nature that determine much of our biology. Chiral molecules have the same chemistry but slightly different 3D structure which often results in radically different function. Some, like proteins, sugars, and DNA, make up life.

BIOTOOLS

(continued from page 15)

excipients; and the ability to follow protein interactions as well as formulation studies (batch-to-batch; biosimilars vs. innovator; liquid vs solid).

Announcing Raman-on-the-Go! The World's First Portable Raman Microscopes

Mobile μ -Raman and μ -BioRaman

In other chiral pairs, one stereoisomer (enantiomer) can save your life, the other can kill you. As a result, these fascinating molecules are of prime interest to biologists, organic chemists, and especially, the pharmaceutical industry.

BioTools' other strengths include structural elucidation of biologics (the new class of highly targeted protein-based drugs) and their newest area of specialty, Raman microscopy. Pittcon will see the debuts of their revolutionary portable Raman microscopes and an add-on accessory to turn an FT-IR spectrometer to a powerful tool for analysis of chiral molecules.

ChiralIR and Mantis DualPEM for

bridge the gap between microscopy and spectroscopy, bringing microRaman out of the lab and into the world at large, opening new opportunities for doing the same analyses in different locations with the same instrumentation.

Smaller than a portable sewing machine, the new mobile design has enabled shorter, more efficient light paths and significant drops in laser power that are gentler on the sample. The integrated PZT



Vibrational Circular Dichroism (VCD)

While regular FT-IR helps to define structure, only a clear 3D picture of a molecule's stereochemistry can define function. ChiralIR and Mantis combine the sensitivity of FT-IR with the stereospecificity of CD into a powerful new technique: Vibrational Circular Dichroism (VCD). VCD can be used to determine the absolute configuration without crystallization and directly measure enantiomeric excess (a measure of the balance of the two stereoisomers) without the need to first separate the mixture.

For the first time ever, existing FT-IR spectrometers can be upgraded to VCD using BioTools' MANTIS DualPEM accessory.

stage dramatically increases scanning speed while the multiple sample modalities (microscope slide, vial, cuvette, syringe) make for unlimited sample handling. When used with SERS substrates or capillaries, the increased sensitivity enables ready detection of bacteria, body fluids, or metabolites in μ l or ppm quantities.

Especially designed for ease-of-use, they will find happy homes in industry and pharma, academe and forensics, mu-

ChiralRAMAN for Raman Optical Activity (ROA)

ROA is being touted as one of the most sensitive techniques for the determination of higher order structure of proteins. And BioTools is the first and only company in the world to offer a dedicated commercial spectrometer for its measurement. Generation II is now available, fully integrated with research-grade microscopy.

PROTA-3S - The Powerhouse for Protein Analysis

PROTA is BioTools' flagship for protein analysis. The new 3S offers speed, sensitivity to handle low concentrations, and turnkey simplicity. New, independent software, “One Click”, quickly acquires and compares single or multiple spectra.

Prota-3S has gained traction in biopharma, producing important results that include structural elucidation of biologics; determination of secondary structure of proteins; characterizing the effects of

continued on page 25

seums, doctor's offices and infusion clinics, and food and water safety testing.

Accessories and Lab services

BioTools also offers a wide range of unique spectroscopic accessories as well as full analytical Lab Services for structural characterization of chiral and biological molecules.

Visit us at Pittcon, in Booth #1247 and online at www.Btools.com