

## **Advanced Solutions Seminar for Nutraceutical Analysis – Agenda**

*October 8, 2012 in Anaheim, CA*

*October 10, 2012 in Vancouver, BC*

*October 12, 2012 in Toronto, ON*

**8:30 am      Registration    (Free seminar – no cost to attend)**

**9:00 am      Exploring the New Frontiers of the Nutraceutical Industry**

Get an overview of the current nutraceutical market while exploring new trends and popular products, from dietary supplements to functional foods and beverages.

**9:15 am – 11:30 am      Morning Session** *(includes 15 min break)*

### **Handheld Vibrational techniques for Raw Material ID: Implementation for cost savings**

In many parts of the world, 100% inspection of incoming raw materials is required. Often the verification of these materials is done by costly and time consuming laboratory techniques in the quality control lab. In some instances, samples are sent out to a third party lab for inspection, causing longer time delays before the ingredients can be used in production. Implementation of handheld techniques for inspection in the receiving bay can provide instant validation of incoming product and substantial cost savings. We will be discussing a case study and providing an opportunity to use the instruments.

### **Use of ASE to solve or improve quality of ingredients in final products**

Find out the specifics of how labs are using ASE to benefit their workflow. Companies in the natural products arena are using ASE to take advantage of the speed, solvent and labor savings to enhance and improve their products. Examples such as ginseng, St. John's wort, etc. will be used to demonstrate why this technique is catching on in the natural products industry.

### **Ion Chromatography and the Analysis of Nutraceutical Products**

The analysis of Nutraceutical products can present unique challenges to the analytical chemist. Ion Chromatography using conductivity detection, or coupled with other detectors, can provide a comprehensive approach to these types of samples. This presentation will highlight the use of ion chromatography in analyzing these diverse sample matrices and will show numerous examples including carbohydrates, amino acids, sucralose, glucosamine, and more.

### **Analysis of Elemental Impurities using ICP-OES and IC/LC ICP-MS**

We will compare inductively coupled plasma optical emission (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS) for elemental analysis. Sample preparation requirements will also be discussed. The analysis example we will use in this presentation is the analysis of an over the counter cold and flu remedy which is a water soluble product. A portion of the drug will be analyzed and the results scaled up to the maximum daily dose, this will be compared to the permitted daily exposure limits. The proposed USP 232 elements As, Cd, Pb, and Hg and the USP 232/233 Class 1 and Class 2 limits will be discussed. Arsenic and Mercury Speciation is required for USP 232 if the total levels for these elements are above the permitted daily exposure limits. This analysis can be completed by using IC/LC ICP-MS.

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**11:45 am – 12:45 pm**      **Lunch**

**12:45 pm – 3:30 pm**      **Afternoon Session** *(includes 15 min break)*

### **Natural Sweetener and Vitamin Determination in Functional Foods by UHPLC and HPLC Methods**

Learn about UHPLC and HPLC methods designed to characterize raw materials and final ingredients in functional foods and nutritional supplements, focusing on two successful case studies. Vitamin determination will be discussed with practical solutions to simplify sample analysis to increase productivity and accelerate throughput.

### **Liquid and Gas Phase Mass Spectrometry for the Nutraceutical Industry**

LC/MS/MS has increased in popularity as a technique to screen, confirm, and quantitate chemicals in the nutraceutical industry. This presentation will discuss how each of the major types of mass spectrometers (ion trap, triple quad, and Orbitrap) are used within the industry. Examples of types of assays they leverage each type of technology will be discussed, focusing primarily on analyzing for pesticides, fat, and water soluble vitamins. The talk will also touch upon the usage of Gas Chromatography in the nutraceutical laboratory.

### **Chromeleon® 7 Chromatography Data System (CDS): Operational simplicity for your laboratory**

Discover how everything you need can be within easy reach, whether you have a single workstation or an enterprise-scaled installation. See how Chromeleon CDS provides rich functionality and high usability for a diverse range of users whose needs vary widely. Usability principles applied throughout the software design will be discussed, and examples will illustrate how this focus helps increase productivity and make the user's experience more enjoyable.

### **Laboratory Information Management Systems (LIMS): How nutraceutical companies are using LIMS to manage their assurance process**

Learn about the quality assurance aspects of LIMS, and how you can use it to make products more efficiently and safer/better. Hear specifically how nutraceutical companies are using LIMS applications to manage, maintain, collate and report all the information required to assure consumers of the quality of their products. LIMS applications deliver a fully integrated solution – from capturing research and safety assessment data, through to raw materials acceptance, manufacturing stages and packaged final products, as well as post manufacturing shelf life data. LIMS markedly improves the efficiency and quality of laboratory generated data, bringing workflow automation and connectivity into the lab.

**3:30 pm**                      **Q&A Session and Closing Remarks**

**4:00 pm**                      **End**