# PESTICIDES & HERBICIDES

## A Growing Concern in the Global Food Supply Chain

### Automated Sample Prep and Highly Sensitive Analysis Solutions

**LIVE WEBCAST:**

**Thursday, December 8, 201111am EST / 8am PST / 1600 GMT**

**Register free at http://chromatographyonline.com/pesticides**

### EVENT OVERVIEW:

Toxaphene, a complex organochlorine pesticide, has been the most broadly applied pesticide in the United States and other countries since the 1970s. The United States banned the use of this pesticide by 1990 after the toxicity and persistence of toxaphene became unquestionable. In 2002, the U.S. EPA was contacted regarding concerns about toxaphene residual wastes and degradation products into streams and estuaries. Traditional methods could potentially underestimate residues once the toxaphene weathering process had begun in the environment. Because of the potential for toxaphene underestimation, degradation products need to be determined with highly sensitive methods. These events have culminated in the validation of a suitable extraction method for weathered toxaphene and its degradation products in fish tissues using Accelerated Solvent Extraction.

Glyphosate, a widely used broad-spectrum herbicide, is monitored for its presence in food. Generally the GC-MS method developed by Alferness is used for analysis. This method is both time consuming and has limitations with limits of quantification across a range of food commodities. By employing suppressed ion chromatography – mass spectrometry (IC-MS/MS) for glyphosate analysis, the required reporting limits can be achieved without time-consuming derivatization. Detection limits as low as 1µg/kg have been achieved using concentrator techniques.

### PRESENTERS:


**DIANA BURDETTE, PhD**
Extraction Group Leader/
LCQQQ Analyst
Organic Chemistry Section
US EPA R4 SESD

**DAVID KNOWLES**
Sample Prep Product Manager
Thermo Fisher Scientific

**STUART ADAMS, PhD**
Higher Analytical Chemist
Food & Environmental Safety
The Food and Environmental Research Agency (FERA)

***Moderator:***
**LAURA BUSH**
Editorial Director
LCGC North America


**For questions contact Jamie Carpenter at jcarpenter@advanstar.com**

### Key Learning Objectives:

- Why the U.S. EPA is looking at toxaphene in fish tissue and how they optimized the extraction process
- Why IC-MS/MS is used by FERA for the analysis of glyphosate without any derivatization
- How the IC-MS/MS method for glyphosate can get down to detection limits of 1µg/kg

### Who Should Attend:

- Those interested in new extraction techniques in food matrices
- Laboratories analyzing pesticides and herbicides
- Food and Beverage R&D, Product Development and Quality Control personnel working on food safety related issues
- Anyone else interested in learning more about extraction and IC technology used in food safety testing

Presented by

LCGC

Sponsored by

DIONEX

Part of Thermo Fisher Scientific