

November 4, 2026 (13:30-14:15)



VENDOR SEMINAR:

Exploring evolution in gas chromatography to address regulatory needs

Exploring evolution in gas chromatography to address regulatory needs

Javier Arrebola¹, Jason Herrington², Ramkumar Dhandapani², Chris English² and Jaap de Zeeuw³

¹ *University of Almeria*

² *Restek Corporation*

³ *Creavisions*

Gas chromatography remains a proven technique for pesticide analysis, yet recent regulatory changes including method consolidation, lower detection, matrix interference –have raised the bar for detection performance. This work evaluates a novel GC-MS column technology and format with uncoated interface minimizing stationary phase degradation and thermal stress at elevated transfer line temperatures. Across a diverse panel of pesticide analytes, it delivered faster baseline stabilization, lower background noise, and improved signal-to-noise ratios in full-scan and SIM modes, with clear benefits for high-boiling-point and late-eluting compounds. By reducing analyte loss and column bleed, the technology enables reliable detection of thermally labile substances at lower detection limits-ready GC-MS & MS/MS workflow.

Learning Objectives:

- Understand how recent regulatory changes—chlorinated solvent ban and method consolidation—are reshaping detection requirements for pesticide analysis.
- Evaluate how a novel GC-MS column with an uncoated interface improves baseline stability, sensitivity, and signal-to-noise ratio across full-scan and SIM modes.
- Apply these advances to build GC workflow that lowers detection limits and improves sensitivity for thermally labile, high-boiling-point compounds.