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**VENDOR SEMINAR:**

**Fast, Reliable Extractions for the Analysis of Multiresidue Pesticides in Agricultural Samples**

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**Fast, Reliable Extractions for the Analysis of Multiresidue Pesticides in Agricultural Samples**

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Introduction

Recent years have seen an increased interest in the analysis of agricultural products, foods and cannabis with regards to pesticides. Many methods have been developed for quick and effective screening of matrices for multiclass and multiresidue analysis (QuEChERS). Automation of such methods can greatly enhance laboratory efficiency, and provided with the right tools, lead to same day sample analysis with greater accuracy and reproducibility.

Method

Pressurized Liquid Extraction (PLE) is an automated technique for extraction of complex matrices. This new technique is a 10-minute extraction and cleanup ready for direct injection. Work done focused on grains, cannabis, plant leaves and roots. Matrices included spices, supplements, and tea. Goal was to develop a simple, rapid, reliable method to analyze between 120-200 pesticides. Matrices were placed in stainless steel extraction cells mixed with MgSO<sub>4</sub>. Extract clean-up was performed using XtractClean™ layered in the cell. Samples were extracted with acetonitrile; no additional clean-up was done. One extract is used for the Sample analysis that is performed on MS triple quads using both GC and LC interfaces.

Preliminary Data

Comparisons were made between extraction with the clean-up sorbents inside the extraction cell, as well as outside the cell. Excellent recoveries of analytes within the targeted group of 120-200 pesticides. Pressurized Liquid extraction delivers fast, reproducible, quantitateable data

Novel Aspect

PLE - Pressurized Liquid Extraction has shown fast, reproducible, results for the multi-residue pesticide analysis of various food matrices. The same extract is used for both GC/MS and LC/MS analysis. It reduces solvent consumption. The entire process is completed in 15 minutes for up to eight sample extraction and cleanups simultaneously. Up to 192 in an 8 hour day.