WASHINGTON CHROMATOGRAPHY DISCUSSION GROUP

Meeting Announcement

Wednesday, January 20, 2016

US Pharmacopeia
12601 Twinbrook Parkway, Rockville, MD 20852

Social hour begins at 6:00 pm
Presentation begins at 7:00 pm

"Improving the quality of chromatographic peak integration and analytical results without human review in multi-analyte high-throughput methods"

Dr. Steven J. Lehotay, Lead Scientist
USDA-ARS Eastern Regional Research Center (ERRC), Wyndmoor, PA

Are you tired of spending all your time in front of a computer staring at screen-after-screen of hundreds of chromatographic peaks? Don't you get frustrated at peak integration software costing thousands of dollars that can't consistently integrate your chromatograms any better than a teenager? As a quality control officer, aren't you sick of all the mistakes you find in the results? Rather than pulling your hair out over subjective close calls in analyte identifications, wouldn't you like a simple mathematical method to give yes/no answers with minimal false positives and negatives? As a manager, do you want higher lab efficiency to analyze more samples and make more money? If you said yes to any of these questions, then consider good old fashioned summation integration, including noise, at the consistent analyte retention times in your MS(/MS) chromatograms followed by postrun data processing that reliably identifies and determines analyte concentrations with no (or very little) human review. Comparisons of this approach vs. conventional integrations in both GC- and LC- MS/MS of many real-world chemical residue analyses in foods show that it provides better results overall.

Biographical Information: Steve Lehotay has worked with USDA-ARS since 1992, starting soon after completing his Ph.D. in Chemistry at the University of Florida, where he also received his B.S. in 1987. He worked as a Research Chemist at the Beltsville Agricultural Research Center in Maryland until 1999, when he relocated to the ERRC. Steve's research involves the development of new methods to efficiently monitor many types of chemical contaminants in food. He investigates all aspects of the analytical process in his research using diverse techniques in novel and useful ways. To

date, he has authored/co-authored 136 scientific papers and >200 presentation abstracts. He is a Thomson Reuters Highly Cited Researcher and recipient of a NACRW Excellence Award (2015), ACS-AGRO Innovation in Chemistry of Agriculture Award (2012), and several awards from AOAC Int., including the Wiley Award (2011), and within the USDA, including a Secretary's Honor Award (2014).

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