Abstract

There are many unanswered questions chemists struggle with in chromatography when optimizing the analysis of drinking water to include inlets, columns and detectors and here are a few examples: Which liner do I choose? When do I use a split vs. splitless? Should I use wool (is it too active)? What column stationary phase works best? Why are there a dozen different 5-type columns and does it matter? How can I reduce my methylene chloride? My experience starting in the lab was overwhelming and it was years before I had answers to these questions. Luckily for your lab we'll condense what we know into some rules that will shortcut the trial & error approach. We'll learn how to troubleshoot chromatographic problems simply by examining the chromatography. For liners there are a few that can be used for almost every analysis, and we'll give you the exceptions as well. We'll simplify your choices for "5-type" columns and evaluate volatiles columns. Using Pro EZGC you will be an expert at method optimization. At the end of the day, you will be able to answer these questions and have optimized run conditions as well as troubleshooting common GC problems.

Outline:

- US EPA 524 Optimization from Concentrations to Analysis
- US EPA 525 Injection Port Optimization with Rapid Analysis
- Identify Problems by Examining Chromatograms
- Method Translator, Solvent Expansion Calculator & Pro EZGC Software

Event speakers

Speaker 1

Chris English

Short Biography

Chris English has managed a team of chemists in Restek's innovations laboratory since 2004. Before taking the reins of the laboratory, he spent seven years as an environmental chemist and was critical to the development of Restek's current line of volatile GC columns. Prior to joining Restek, he operated a variety of gas chromatographic detectors conducting method development and sample analysis for the analysis of environmental pollutants. Chris holds a B.S. in environmental science from Saint Michael's College, USA.

Speaker 2

Ed George



Short Biography

Ed George has a BS in Chemistry from the University of Notre Dame with a concentration in Environmental Science. He worked for over 15 years in the environmental laboratory industry, responsible for developing novel sample preparation and analytical methods in soil and water using GC- and LC-MS/MS platforms. In 2014, he joined Thermo Fisher Scientific as a Senior Applications Scientist and developed several workflow applications for pesticides, veterinary drugs, and PFAS in various food matrices on both LC-MS/MS and high-resolution Orbitrap MS platforms. He is currently the Environmental and Food Safety Regulatory Marketing Manager focused on developing and executing market strategies that drive growth across the environmental testing and food safety segments.

Current Employer: Thermo Fisher Scientific
Affiliations: ASTM D19, AOAC, ASMS, ACIL, ASMS

Speaker 3

Agustin Pierri



Agustin Pierri, Ph.D.
Laboratory Technical Director

Short Biography

Dr. Agustin Pierri obtained his BS in Chemistry from the University of Southern California and his Ph.D. in Chemistry from the University of California Santa Barbara. He has been an analyst in different sections of the laboratory and since 2007 has worked in the LC-MS/MS department developing all analytical methods by that technique. Prior to becoming Technical Director in July of 2016, He has been working as Methods Development Manager for all departments of the Laboratory.