

WS04: Method Development: Foundations for the New Toxicologist, Part I

Date: Monday, October 27

Time: 8:00 AM – 12:00 PM

Audience Knowledge Level: Basic – suitable for individuals new to the field, requires little prior knowledge to the subject matter

Rates:

| Membership | Early Bird (June 25 - Sep 10) | Late (Begins Sept 11) | Onsite (Begins Oct 9) |
|-------------------|--|----------------------------------|----------------------------------|
| Member | \$150 | \$175 | \$200 |
| Student | \$150 | \$175 | \$200 |
| Non-Member | \$200 | \$225 | \$250 |

Workshop Chairs:

Elisa N Shoff, MS, D-ABFT-FT

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Forensic Toxicologist II/Training and Method Development Coordinator

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Abstract

Forensic Toxicology is a dynamic field, with evolving instrumentation and techniques introduced regularly; The task of developing an analytical method can be daunting for both seasoned Toxicologists, and those new to the profession, especially with the need for adaptability to recommended standards of practice and innovation. The SOFT Young Forensic Toxicologists Committee, in conjunction with the SOFT Applied Analytical Toxicology Committee, present a workshop to address the basics of method development concepts, focusing on current and relevant techniques. Insight into foundational principles and troubleshooting sample preparation (traditional matrices, including oral fluid), chromatography (gas chromatography and liquid chromatography), and mass spectrometry (tandem mass spectrometry, quadrupole time-of-flight) will be covered. In addition, techniques for researching previously developed methods, and considerations for increased efficiency with the integration of automated processes will also be discussed. The workshop will conclude with a question-and-answer session, and a brief discussion of ANSI/ASB Standard 036 as it applies to method development; a preamble to part II of our joint workshop, focusing on method validation.

Learning Objectives

1. Provide attendees with a solid foundation in sample preparation techniques required to develop the methods needed for the landscape of drugs encountered in toxicology casework.
2. Explore the process and challenges of method development primarily utilizing liquid chromatography coupled to tandem mass spectrometry or quadrupole time-of-flight mass spectrometry.
3. Introduce the concept of workflow automation into the method development process.

Speakers

Wayne Lewallen

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Robert Sears

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Toxicologist 3/Method Development Supervisor

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Greg Janis

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Research and Development, AVP; Mass Spectrometry Co-Discipline Director

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Chemistry Research Section Supervisor

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Workshop Agenda

| Time | Topic | Speaker |
|-------------------|--|-------------------------------|
| 8:00-8:05 am | Introduction | Elisa Shoff Wayne Lewallen |
| 8:05-8:20 am | Research: Starting Your Development Off Right | Wayne Lewallen |
| 8:20-9:05 am | Sample Preparation: Foundational Techniques and New Considerations | Robert Sears |
| 9:05-9:30 am | Chromatography Essentials: The Road Map to Successful Separation | Crystal Arndt |
| 9:30-10:00 am | Tuning Up for Quality Quadrupole Quantitation | Greg Janis |
| 10:00-10:30 am | Break | |
| 10:30-11:00 am | Maximize Your QTOF Data: Method Development Strategies | Sara Walton |
| 11:00-11:30 am | Applied Automation: Letting Machines Handle the Dirty Work | Tyler Devincenzi |
| 11:30-11:45 am | Mastering Method Development: Key Concepts from ANSI/ASB 036 | Rebecca Wagner |
| 11:45 am-12:00 pm | Question and Answer | All Speakers |