**FIA Training Program Overview**

**Description**

This 1 ½ - 2 day session is designed to prepare you to operate the Lachat QC8000 Flow Injection Analyzer (FIA) proficiently and independently. Through a combination of interactive learning activities and hands-on projects, you will master the skills necessary to perform analyses while gaining a conceptual understanding of instrumental functionality, methods, and procedures.

**Learning Outcomes**

As a result of this session, you will...

- Value the Q8000 as a useful tool for your research and for additional applications beyond your own
- Understand the basic theory of colorimetry and how it is used to quantify dissolved analytes
- Understand QC8000 chemistry, fluidics, and mechanics
- Know where to go to find answers to questions regarding analysis
- Be able to set up, execute, and analyze a QC8000 run and pass all QC limits established within the prescribed DQM
- Be prepared to analyze samples from your own research project
- Be able to troubleshoot simple problems/errors occurring during an analysis
Topical Outline

I. Introduction

II. Theory and Hardware
   A. Hardware Overview
   B. FIA Theory
   C. Sample Prep
   D. Lachat Methods and Schematics

III. Software
   A. Method
   B. Tray
   C. DQM
   D. FDT and Other Important Concepts
   E. Software Project

IV. Operation
   A. Hardware Installation
   B. Dye Test
   C. GEL Procedures
   D. Trial Run A
   E. Standard Prep
   F. Trial Run B

V. Post Run & Summary
   A. Data Analysis
   B. Troubleshooting
   C. Quiz
   D. Planning For the Future