

## Advanced Troubleshooting and Maintenance at SCIEX Location

At SCIEX, our Success Technology Programs follow the proven spaced learning approach to maximize learning retention. The training process includes a unique blend of self-paced eLearning, instructor led and hands-on training provided at a SCIEX location.

### COURSE GOALS AND OUTCOME:

This SCIEXUniversity course provides a variety of hands-on troubleshooting and maintenance exercises, best practices and finishes with a Troubleshooting Challenge for the Learner. It is delivered at a SCIEX location by an experienced SCIEX instructor. It is supported by a series of easy-to-use Quick Reference Guides.

It is intended for those who have completed a SCIEXUniversity Success Program, or have significant operational experience with SCIEX LC-MS systems.

This course is intended to provide a user with the knowledge necessary to successfully troubleshoot and fix common MS and HPLC issues. You will also learn how to proactively maintain your LC-MS system, and how to exchange various consumable parts to keep your system running properly.

Upon completing the course, you should be comfortable with performing basic and advanced HPLC and MS maintenance, tuning and calibrating the mass spectrometer, troubleshooting common HPLC and MS issues, understanding quantitation parameters, and using outlier settings and metric plots to identify issues with the data results.

This can lead to an increase in the productivity and uptime of your LC-MS system, and reduce the need for engineer call outs or remote assistance. You will gain knowledge of which consumables to keep on-site to increase your system uptime.

### TRAINING PROGRAM OVERVIEW:

Your Success Technology Training includes the following:

- 2.5 days of instructor-led and hands-on training provided at a SCIEX location by an experienced instructor

- Related self-paced eLearning courses, lectures, reference material and lab exercises
- Workflow certification upon successful completion of final exam
- Access to SCIEXUniversity database of >100 eLearning courses
- Access to SCIEXNow™ online support tools

### INSTRUCTOR LED TRAINING TOPICS:

- **MS and HPLC Troubleshooting**
  - HPLC and MS Best Practices
  - HPLC and MS troubleshooting
- **HPLC Maintenance**
  - Replace the autosampler needle
  - Replace low pressure rotors
  - Replace high pressure rotors
  - Replace check valves
  - Replace the plunger and plunger seal
  - Replace pump seals
  - Resetting counters
  - Understanding access controls
  - Autosampler calibration and position adjustment
  - Routine LC maintenance tasks
- **MS Maintenance**
  - Front end cleaning under vacuum
  - Front end cleaning at atmospheric pressure
  - Ion guide cleaning
  - Replace or add pump oil
  - Replace air filter – where applicable
  - Replace source electrode (APCI or ESI probes) – where applicable
  - Replace source heater
  - Replace APCI corona discharge needle – where applicable
- **Mass Spectrometer Tuning and Calibration**
  - Manual instrument tuning and calibration
  - Automated instrument tuning and calibration
- **Quantitation Troubleshooting**
  - Important MQ4 and SignalFinder™ integration parameters
  - Outlier settings
  - Ion ratios

- Metric plots
- **Troubleshooting Challenge**
  - Practical exercise designed to test troubleshooting skills

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**Headquarters**  
500 Old Connecticut Path | Framingham, MA 01701 USA  
Phone 508-383-7700  
[sciex.com](http://sciex.com)

**International Sales**  
For our office locations please call the division  
headquarters or refer to our website at  
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