

## Syllabus for 2 day advanced LC-MS quantitation troubleshooting at customer site

SCIEX training courses follow the proven spaced learning approach to maximize learning retention. The training process includes a blend of instructor-led training, hands-on laboratory exercises and self-paced eLearning, provided at the customer site.

### Course goals and outcome

This course is intended for learners who have completed a SCIEX Now Learning Hub Success Program, or have significant operational experience with SCIEX LC-MS systems. This course should provide you with the knowledge necessary to successfully troubleshoot and fix common HPLC and MS issues, and includes a variety of hands-on troubleshooting exercises, best practices and finishes with a troubleshooting challenge for the learner.

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

This course offers a workflow certificate upon completion of a final knowledge assessment.

### Training program overview

Your training includes the following:

- 2 days of instructor-led and hands-on training provided at the customer site by an experienced Applications Support Scientist
- Complimentary follow-up virtual session with an Applications Support Scientist
- Related self-paced eLearning courses, lectures, reference material and lab exercises
- P.A.C.E.<sup>®</sup> Continuing Education Credits
- Access to SCIEX Now Learning Hub database of >100 eLearning courses
- Access to SCIEX Now online support tools available for up to 3 learners
- Hands-on focus for 1 Primary learner and up to 3 learners total for demonstration and content

- Workflow certificate upon successful completion of final exam and permanent access to all course materials for reference

### Instructor-led training topics

- Tuning and calibration
  - Manual tuning and calibration of the mass spectrometer
  - Automated tuning and calibration of the mass spectrometer
  - CEM tuning
- MS and LC troubleshooting
  - Computer maintenance and communication
  - HPLC and MS best practices
  - HPLC and MS troubleshooting
  - HPLC and MS maintenance
- Quantitation troubleshooting
  - Important MQ4 and SignalFinder integration parameters
  - Outlier settings
  - Ion ratios
  - Metric plots
- Troubleshooting challenge
  - Practical exercise designed to test troubleshooting skills.

The LC-MS system must be installed and configured before the training. Refer to the [Required consumables for 2 day advanced LC-MS quantitation troubleshooting at customer site](#) document for consumables that you must provide for use during the training.

### P.A.C.E.<sup>®</sup> certification

SCIEX is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.<sup>®</sup> Program. Learners interested in obtaining a P.A.C.E.<sup>®</sup> certificate and P.A.C.E.<sup>®</sup> accreditation for taking this course (equal to 12 P.A.C.E.<sup>®</sup> credits) must attend the entire training session and complete a brief evaluation survey.

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## Required consumables for 2 day advanced LC-MS quantitation troubleshooting at customer site

Our training courses follow the proven spaced learning approach to maximize learning retention. The training process includes a blend of instructor-led training, hands-on exercises and self-paced eLearning, provided at the customer site. This training course provides a variety of hands-on troubleshooting exercises, best practices and finishes with a troubleshooting challenge for the learner.

For this training to be successful, the LC-MS system must be installed and configured before the training. **Table 1** lists consumables that are needed for use during the training.

**Table 1: Required consumables needed for training**

Description	Part number	Size
<i>Triazine standard solution</i>	4376887	N/A
<i>Phenomenex Synergi 4 µm Fusion-RP 80Å HPLC column</i>	4376878	50 mm x 2.0 mm
<i>PEEK tubing</i>	4425163	0.13 x 3000 mm
<i>PEEK tube cutter</i>	011281	N/A
<i>Syringe</i>	WC010615	1 mL
<i>Syringe needle</i>	1005819	1 mL
<i>Syringe adapter</i>	1008236	N/A
<i>LC/MS Standards Kit with High/Low PPGs</i>	4406127	N/A
<i>Fitting PEEK tee 0.020 in BORE</i>	1006550	N/A
<i>LC-MS grade water</i>	N/A	N/A
<i>LC-MS grade methanol (stored in glass bottles)</i>	N/A	N/A
<i>LC-MS grade acetonitrile (stored in glass bottles)</i>	N/A	N/A
<i>LC-MS grade isopropanol</i>	N/A	N/A
<i>Formic acid</i>	N/A	N/A
<i>Lint-free wipes</i>	018027	11 x 21 cm, 4.3 x 8.3 inches
<i>Small poly swab</i>	1017396	N/A
<i>Alconox packets</i>	400667DHR	N/A

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