



Learning Hub learning tools

Each course at SCIEX Learning Hub is a unique experience. Below you will find a few samples of the learning tools you may encounter while taking a course. You will notice some great reference materials that you will be able to keep for years to come.

Lab exercise

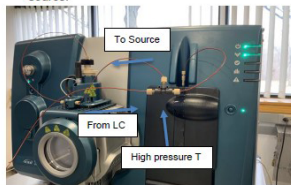
ESI Source and Gas Optimization

Objective: To become familiar with manual and automated optimization of source/gas parameters in ESI mode.

SECTION 1: MANUAL SOURCE/GAS OPTIMIZATION

1. Hardware and Software Setup

- Activate a configuration that only contains the mass spectrometer.
- Load the syringe with 5x concentrated (compared to infusion concentration) triazine compound solution.
- Plumb the outlet of the autosampler into the bottom of the inlet of the high pressure T.
- Plumb the syringe needle into the side of the inlet of the high pressure T.
- Plumb the remaining outlet to the inlet of the source.



Source Parameter	Initial Value
Collision gas (CAD)	Default
Curtain gas (CUR)	30
Ion source gas 1 (GS1)	50
Ion source gas 2 (GS2)	50
IonSpray voltage (IS)	5500
Temperature (TEM)	500

Table 1: Initial Source/Gas Parameter Values

- Manually start the flow on the LC. Choose the flow rate that will be used in the final method and the approximate solvent composition where the analytes of interest elute.
- Change the dwell time for all compounds to 40ms. Set the period duration to 20 minutes, and click **Start**.

2. Optimization of Source and Gas Settings

- Once the TIC is stable, adjust the various source and gas parameters to maximize MRM signal intensity.
- Record the optimized values below and update the tuning method with these values. Save the method.

Source Parameter	Optimized Value
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Consumable part numbers

Required consumables for 2 day advanced LC-MS method development 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 variety of instructor led training and hands-on laboratory exercises, and finishes with a Method development challenge.

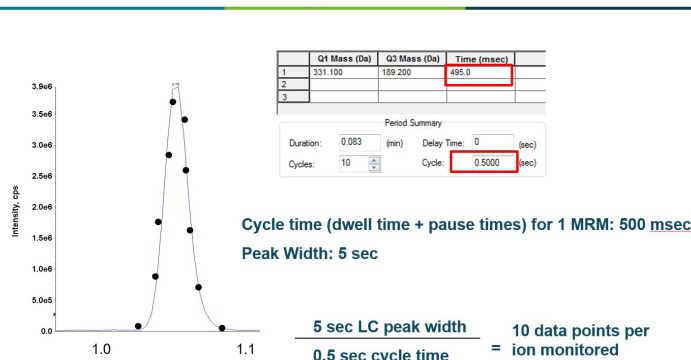
For this training to be successful, the LC-MS system must be installed and configured before the training. Table 1 lists consumables that are needed for use during the training.

Table 1: Required consumables needed for training

Description	Part number	Size
Triazine standard solution	4376887	N/A
Phenomenex Synergi 4 μm Fusion-RP 80Å HPLC column	4376878	50 mm × 2.0 mm
PEEK tubing	4425163	0.13 × 3000 mm
PEEK tube cutter	011281	N/A
Syringe	WC010615	1 mL
Syringe needle	1005819	1 mL
Syringe adapter	1008236	N/A
Fitting PEEK tee 0.020 in BORE	1008550	N/A
LC-MS grade water	N/A	N/A
LC-MS grade methanol (stored in glass bottles)	N/A	N/A
LC-MS grade acetonitrile (stored in glass bottles)	N/A	N/A
Formic acid	N/A	N/A

Lectures covered

Example 1: Dwell Time Using 1 MRM Transition



Recommended eLearning

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