

LC Cleaning

NOTES

A: Water-based mobile phase lines are cleaned on a weekly basis.

QEF1: A2, B1, B3

QEF2: A1, A3, B2

B: Remaining buffer lines are in ACN and don't require regular cleaning but should be purged at the end of each cleaning procedure.

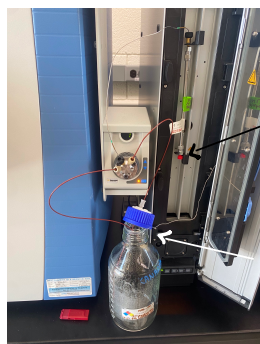
C: First clean lines with LC-MS water to remove salts. Then clean with cleaning mix and finally wash out cleaning mix with LC-MS water before placing lines back in their corresponding buffers.

D: Cleaning mix composition:

COMPONENT	%	ml for 1L
LC-MS water	25	250
Isopropanol	25	250
Methanol	25	250
ACN	25	250

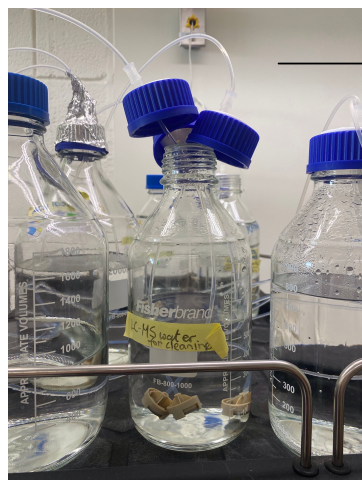
PROCEDURE

1. Disconnect columns from LC and place column peek lines in waste bottles until cleaning is over.

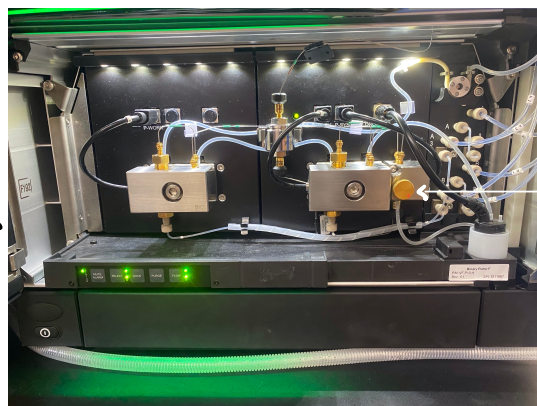


Make sure to cap column after disconnecting
so it doesn't dry
Peek line into waste

2. Place tubes in corresponding solutions (see below). Blot dry with kim wipe as needed.



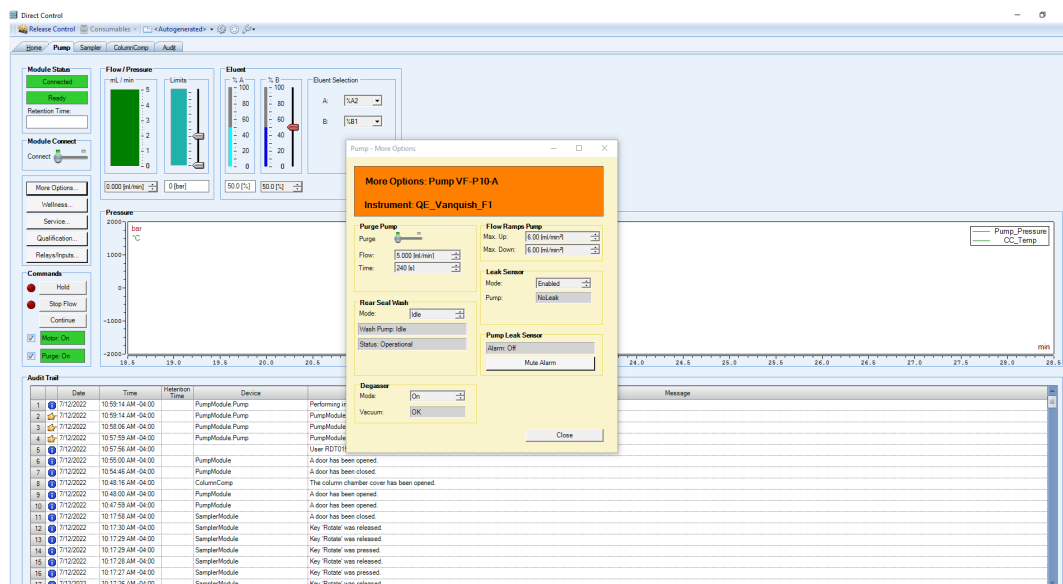
move tubes
among
cleaning solutions



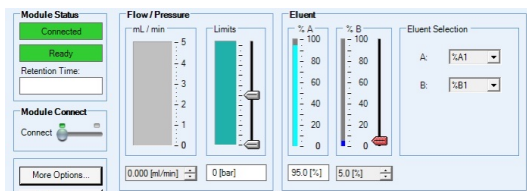
Purge
valve

3. Open purge valve: turn counterclockwise for 1 and a half turns.

4. Go to “Direct Control.” Go to pump tab and set buffer line percentages according to the table below, and purge sequentially.



Direct Control
↓
Pump
tab
↓
More options
(on left)
↓
Purge dial
to left



Set buffer line percentages

FIRST PURGE

LC-MS Water

	QE1	QE2
1	A2: 50% B1: 50%	A1: 50% B2: 50%
2	A2: 50% B3: 50%	

SECOND PURGE

LC-MS Cleaning Mix

	QEF1	QEF2
1	A2: 50% B1: 50%	A1: 50% B2: 50%
2	A2: 50% B3: 50%	

5. Close purge valve. Set flow at 0.250 mL/min (through any of the buffer lines just purged in cleaning mix). Run cleaning mix through system for 20 min.
6. Run 100% ACN through the system for 1-2 minutes (could be any of the buffer lines in ACN). Wait for pressure to drop (for example from 22 bar to 17 bar).
7. Place buffer lines back in LC-MS water. Open purge valve random complete the third purge.

THIRD PURGE

LC-MS Water

	QEF1	QEF2
1	A2: 50% B1: 50%	A1: 50% B2: 50%
2	A2: 50% B3: 50%	

8. Place tubes back in original mobile phase bottles and purge as follows.

MOBILE PHASE PURGE

	QE1	QE2
1	A1: 50% B1: 50%	A1: 50% B1: 50%
2	A2: 50% B2: 50%	A2: 50% B2: 50%
3	A3: 50% B3: 50%	A3: 50% B3: 50%

8. Final purge for tubes and buffers to be used in consequent runs.
9. Close purge valve and run at 0.3 mL/min through the system for 5 minutes.
10. Change flow to 0.1 mL/min and connect columns.
11. Run buffer through system for 20-30 minutes.