

## How to Run the Samples (Remote-in Day)

- Follow the procedure for remoting into the instrument
- The instrument will be prepared by RAIL staff prior to your appointment time
- Once you have remote access to the instrument, the Chromeleon software should be open to the sequence you will run. If it is minimized, make the program full size. This software is the green chameleon.



- It should look like this:

The screenshot displays the Chromeleon software interface. The main window shows a sequence titled "04212016 Test Run" with a table of 15 rows. The table columns are: #, Name, Type, Position, Volume [µl], Instrument Method, Processing Method, Status, Inject Time, and Lock Sta. The rows include a blank sample, student samples, and nitrate levels. Below the main table, there is a section for "Associated Items" with a table listing items like "Default", "New Processing Method", "Nitrate Method", and "Nitrate Method 2".

#	Name	Type	Position	Volume [µl]	Instrument Method	Processing Method	Status	Inject Time	Lock Sta
1	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
2	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
3	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
4	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
5	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth...	Idle		
6	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
7	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
8	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
9	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
10	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
11	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
12	Nitrate Level 2	Unknown	GA2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
13	Nitrate Level 3	Unknown	GA3	10.0	Nitrate Method 2	New Processing Meth...	Idle		
14	Nitrate Level 4	Unknown	GA4	10.0	Nitrate Method 2	New Processing Meth...	Idle		
15	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth...	Idle		

Name	Type	Date Modified	Comment
Default	Report Template	9/24/2015 1:28 PM	
Default	View Settings	12/18/2015 9:43 AM	
New Processing Method	Processing Method	12/10/2015 9:16 AM	
Nitrate Method	Instrument Method	9/21/2015 4:19 PM	Nitrate Method
Nitrate Method 2	Instrument Method	11/23/2015 3:57 PM	Nitrate Method

The data, sample names, and length of the sequence will be dependent upon your specific lesson.

- When you are ready, click “start”

#	Name	Type	Position	Volume [μl]	Instrument Method	Processing Method	Status	Inject Time	Lock Sta
1	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
2	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
3	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
4	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
5	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth...	Idle		
6	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
7	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
8	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
9	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
10	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
11	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
12	Nitrate Level 2	Unknown	GA2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
13	Nitrate Level 3	Unknown	GA3	10.0	Nitrate Method 2	New Processing Meth...	Idle		
14	Nitrate Level 4	Unknown	GA4	10.0	Nitrate Method 2	New Processing Meth...	Idle		
15	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth...	Idle		

- After pressing “start,” your window should look like this:

#	Name	Type	Position	Volume [μl]	Instrument Method	Processing Method	Status	Inject Time	Lock Sta
1	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth...	Running		
2	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
3	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
4	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
5	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth...	Idle		
6	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
7	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
8	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
9	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
10	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
11	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth...	Idle		
12	Nitrate Level 2	Unknown	GA2	10.0	Nitrate Method 2	New Processing Meth...	Idle		
13	Nitrate Level 3	Unknown	GA3	10.0	Nitrate Method 2	New Processing Meth...	Idle		
14	Nitrate Level 4	Unknown	GA4	10.0	Nitrate Method 2	New Processing Meth...	Idle		
15	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth...	Idle		

- The blank will take approximately 12 minutes to run, and the peak on the first sample will begin to show about 9 minutes after that.
- You will have about 20 minutes of downtime after pressing the “start” button before you can watch the sample peaks come out in real time.
- To watch the peaks come out in real time, select “Instruments,” from the bottom left.

Chromleon Console

04212016 Test Run

#	Name	Type	Position	Volume [µl]	Instrument Method	Processing Method	Status	Inject Time	Lock Sta
1	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth.	Running		
2	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth.	Idle		
3	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth.	Idle		
4	Student Sample 1	Unknown	BC1	10.0	Nitrate Method 2	New Processing Meth.	Idle		
5	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth.	Idle		
6	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth.	Idle		
7	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth.	Idle		
8	Student Sample 2	Unknown	BC2	10.0	Nitrate Method 2	New Processing Meth.	Idle		
9	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth.	Idle		
10	Blank	Unknown	GB1	10.0	Nitrate Method 2	New Processing Meth.	Idle		
11	Nitrate Level 1	Unknown	GA1	10.0	Nitrate Method 2	New Processing Meth.	Idle		
12	Nitrate Level 2	Unknown	GA2	10.0	Nitrate Method 2	New Processing Meth.	Idle		
13	Nitrate Level 3	Unknown	GA3	10.0	Nitrate Method 2	New Processing Meth.	Idle		
14	Nitrate Level 4	Unknown	GA4	10.0	Nitrate Method 2	New Processing Meth.	Idle		
15	Nitrate Level 5	Unknown	GA5	10.0	Nitrate Method 2	New Processing Meth.	Idle		

Sequence '04212016 Test Run' selected

- It should appear as below, but if it is not already selected, select the "UV" tab

Chromleon Console

UV

Acquisition

UV On

Vis Off

Autozero

Acquisition On

Acquisition Off

More Settings

Wellness...

Service...

Qualification...

Relays/Inputs...

Signal Settings

Data Collection Rate: 5.0 Hz

Time Constant: 0.12 s

UV 1: 214 nm

UV 2: 210 nm

UV 3: 251 nm

UV 4: 224 nm

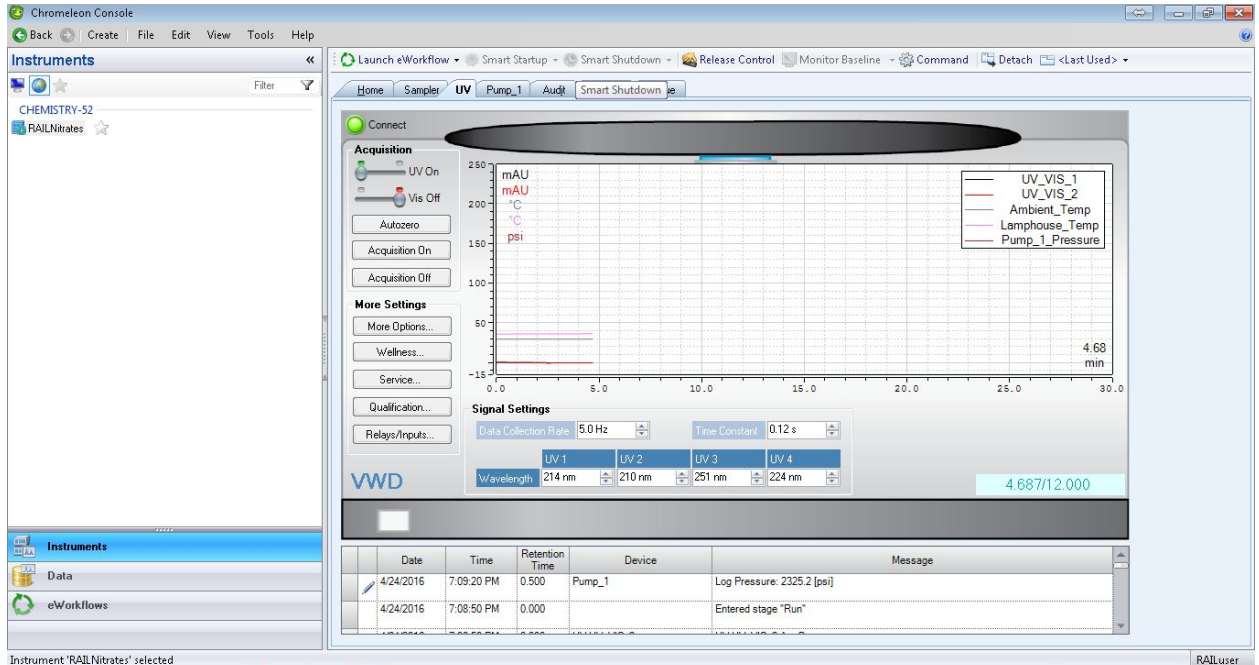
1.686/12.000

Date	Time	Retention Time	Device	Message
4/24/2016	7:09:20 PM	0.500	Pump_1	Log Pressure: 2325.2 [psi]
4/24/2016	7:08:50 PM	0.000		Entered stage "Run"

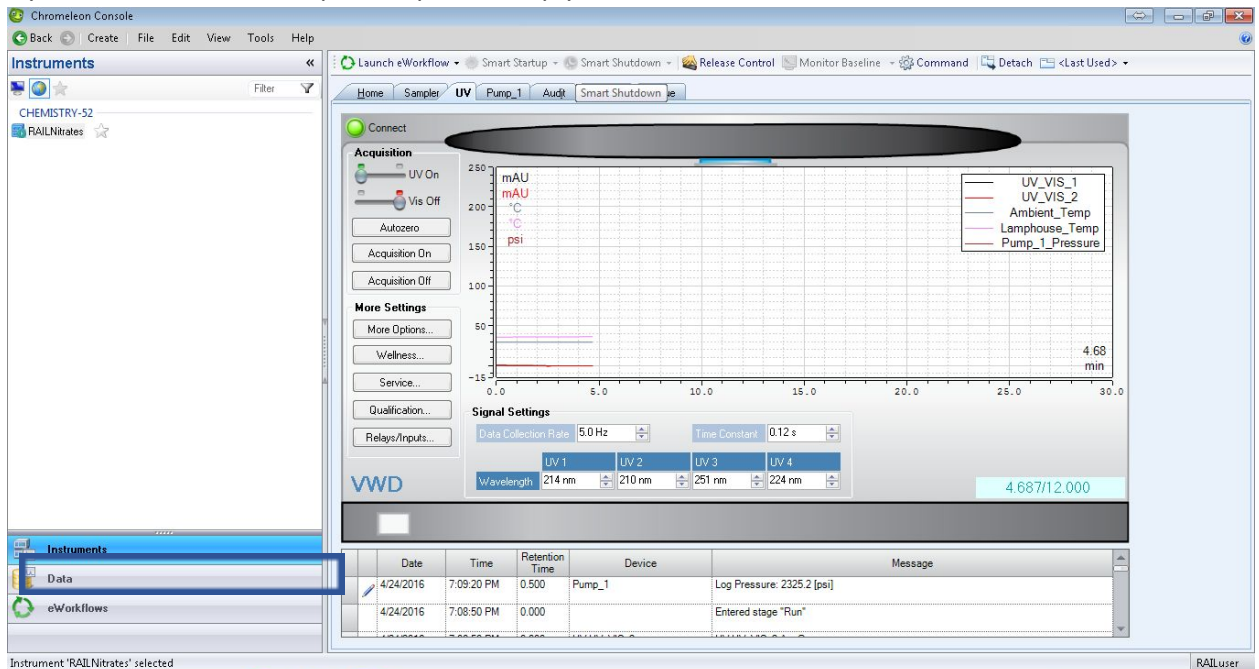
Instrument 'RAILNitrates' selected

- The window will now look like this:





- After the blank is finished running, the sequence will automatically move to the injection of the first sample
- If you wish to view the sequence queue, simply switch back to the data tab



- It will look like this:

Chromeleon Console - 04212016 Test Run (Running)

#	Name	Type	Level	Position	Volume [µl]	Instrument Method	Processing Method	Status	Inject Time
1	Blank	Unknown		GB1	10.0	Nitrate	New Processing Meth.	Finished	4/24/2016 7:08:50 PM
2	Student Sample 1	Unknown	BC1		10.0	Nitrate Method 2	New Processing Meth.	Running	
3	Student Sample 1	Unknown	BC1		10.0	Nitrate Method 2	New Processing Meth.	Idle	
4	Student Sample 1	Unknown	BC1		10.0	Nitrate Method 2	New Processing Meth.	Idle	
5	Nitrate Level 5	Unknown	GA5		10.0	Nitrate Method 2	New Processing Meth.	Idle	
6	Student Sample 2	Unknown	BC2		10.0	Nitrate Method 2	New Processing Meth.	Idle	
7	Student Sample 2	Unknown	BC2		10.0	Nitrate Method 2	New Processing Meth.	Idle	
8	Student Sample 2	Unknown	BC2		10.0	Nitrate Method 2	New Processing Meth.	Idle	
9	Nitrate Level 1	Unknown	GA1		10.0	Nitrate Method 2	New Processing Meth.	Idle	
10	Blank	Unknown	GB1		10.0	Nitrate Method 2	New Processing Meth.	Idle	
11	Nitrate Level 1	Unknown	GA1		10.0	Nitrate Method 2	New Processing Meth.	Idle	
12	Nitrate Level 2	Unknown	GA2		10.0	Nitrate Method 2	New Processing Meth.	Idle	
13	Nitrate Level 3	Unknown	GA3		10.0	Nitrate Method 2	New Processing Meth.	Idle	
14	Nitrate Level 4	Unknown	GA4		10.0	Nitrate Method 2	New Processing Meth.	Idle	
15	Nitrate Level 5	Unknown	GA5		10.0	Nitrate Method 2	New Processing Meth.	Idle	

Sequence '04212016 Test Run' selected

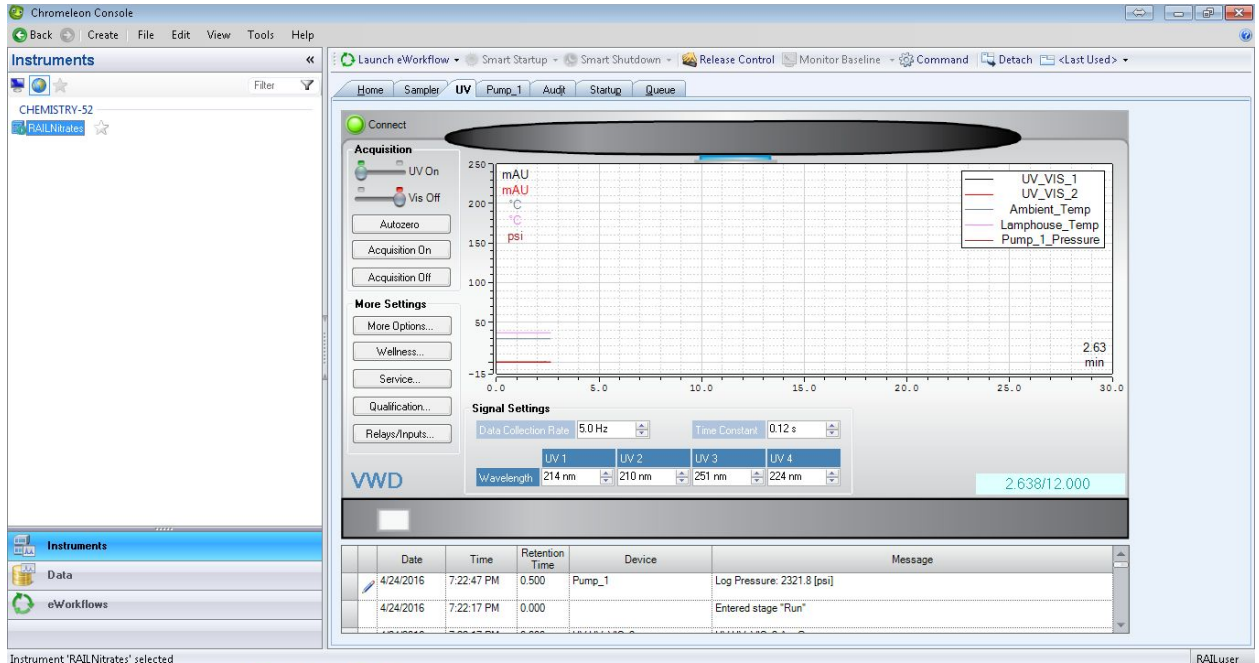
- You will want to watch the peaks of the sample come out in real time.
- Switch back to the “Instruments” tab

Chromeleon Console - 04212016 Test Run (Running)

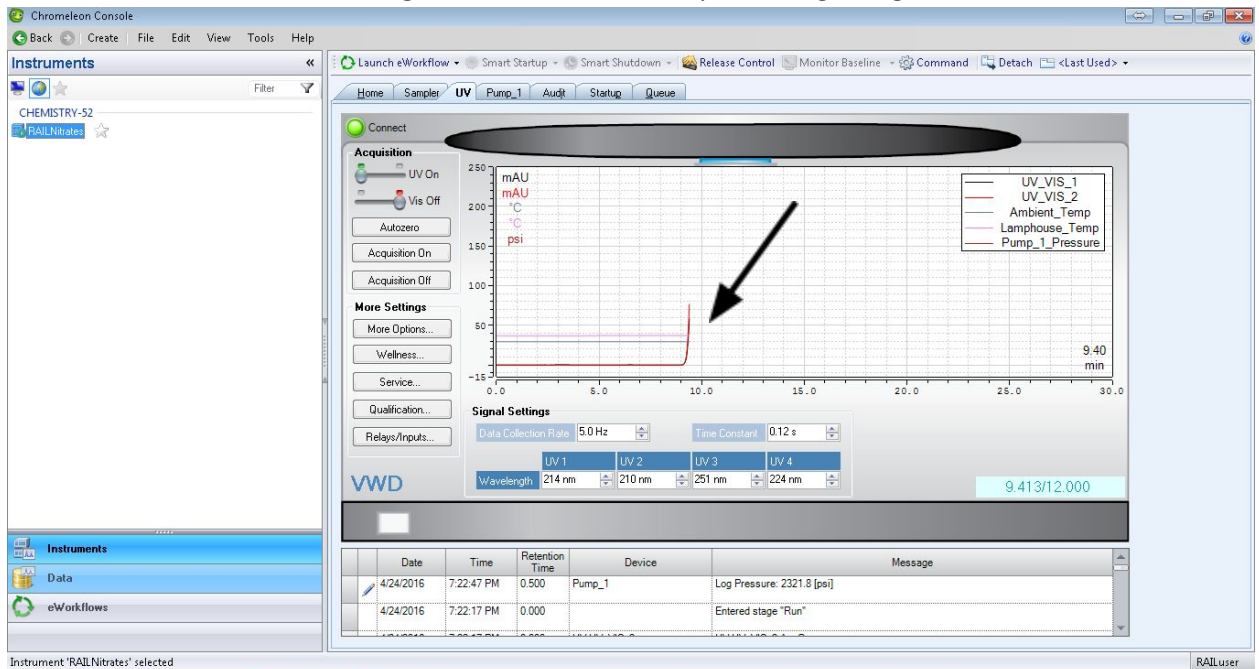
Name	Type	Date Modified	Comment
Default	Report Template	9/24/2015 1:28 PM	
Default	View Settings	12/18/2015 9:43 AM	
New Processing Method	Processing Method	12/10/2015 9:16 AM	
Nitrate Method	Instrument Method	9/21/2015 4:19 PM	Nitrate Method
Nitrate Method 2	Instrument Method	11/23/2015 3:57 PM	Nitrate Method

Sequence '04212016 Test Run' selected

- It will now look like this again:

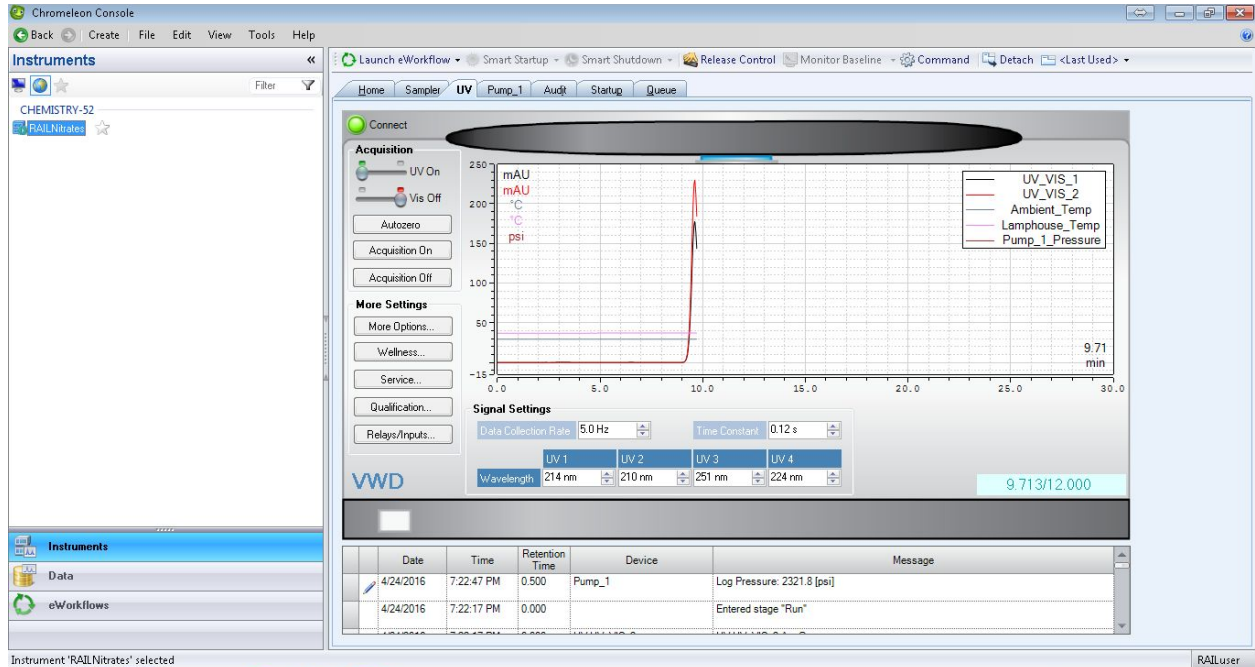


- Around 9 minutes, the peaks will start to elute. Depending on what is in the sample, there may be multiple peaks, some of them eluting earlier than 9 minutes.
- Watch the red and black lines begin to rise – this is a compound beginning to be detected.



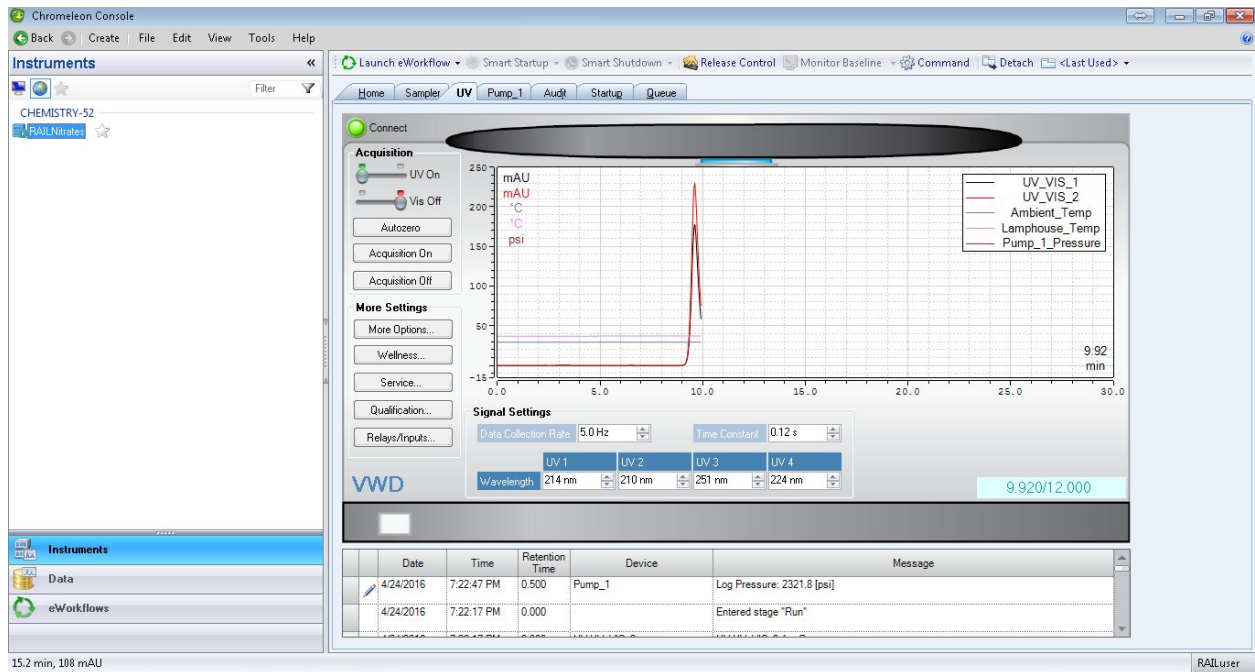
- The peak will continue to rise and then begin to fall:





Instrument 'RAILNitrates' selected

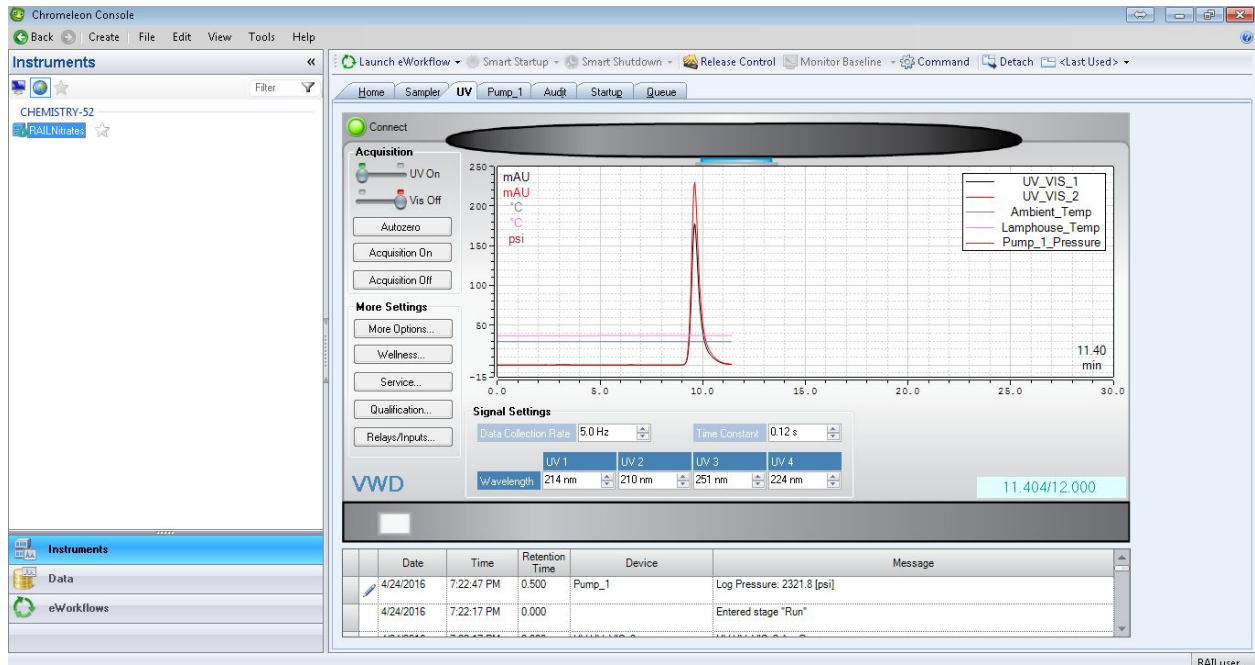
RAILuser



15.2 min, 188 mAU

RAILuser

The peak will then return to a flat line, or "baseline"



- The sequence is now running. You may leave the program alone and return later to obtain data.
- Feel free to switch between the “instruments” and “data” tab, to visualize the sequence progress and the detection of the sample.
- Please do not change any values or close the program.
- If anything should go awry or does not appear as in these instructions, please consult with RAIL staff.