

How to Run a Demonstration Sample on the CASPIE HPLC

HPLC stands for High Performance Liquid Chromatography. It is used to separate and quantify complex mixtures. HPLC is used to quantify ascorbic acid in your food samples.

This document gives instruction for running a demonstration sample, not for samples you generate in your laboratory.

Please Note:

DO NOT make any changes to the instrument that are not instructed in this document. Others will use the instrument after you. Be courteous to your fellow students and leave them a usable instrument!



Load the CASPiE Instrument Site



- To open the HPLC remote control software launch your web browser and navigate to the CASPiE instrument website at <https://instruments.caspie.org>.
- Enter your account information to login.

The screenshot shows the CASPiE Instrument Access login interface. At the top, the CASPiE logo and the text "Instrument Access" are displayed. Below this, a grey login box contains the following elements:

- Welcome CASPiE Users**
- Login to access your CASPiE resources.
- User name:
- Password:
-

Below the login box, a message reads: "Please enter your account credentials then click Log On to get access to your reserved instrument time. If you have trouble logging in, contact Debora Steffen by [email](#) or phone (765-494-4959)."

The HPLC Control Software



The software used to control the HPLC instrument is called 'HPLC Remote Control'.


You will have access to the HPLC instrument for remote control only during your scheduled time.

You will also see the icon for HPLC data processing. You will always have access to the HPLC data processing software during a CASPIE module.

A screenshot of the CASPIE Instrument Access web interface. At the top, the CASPIE logo is on the left and the text "Instrument Access" is on the right in a large, orange, sans-serif font. Below this, a welcome message reads: "Welcome to your personalized view of instrument applications. authorized to use at this time. Click an icon to launch an applica". A circular icon of a video camera is positioned to the left of the text "View Instruments", which is underlined. Below this, another line of text says: "You can view the instruments via web cameras. Click on the link". At the bottom, there is a "Main" header bar. Underneath, two icons are displayed side-by-side. Each icon is a diamond shape composed of smaller squares, with a green square at the bottom. The first icon is labeled "HPLC Data Processing" and the second is labeled "HPLC Remote Control".


CASPIE Instrument Access


Welcome to your personalized view of instrument applications. authorized to use at this time. Click an icon to launch an applica

 [View Instruments](#)

You can view the instruments via web cameras. Click on the link

Main

 HPLC Data Processing

 HPLC Remote Control

The HPLC Camera

While you are using the HPLC you can view the actual instrument live via an internet camera. (Note that Java is required for loading the camera image.)

The camera is accessed via the link labeled 'View Instruments' next to the camera icon.

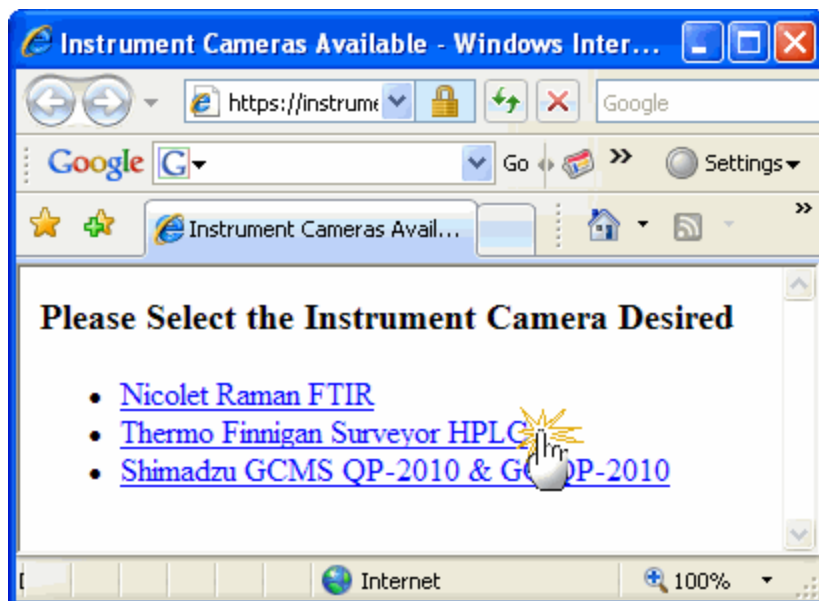
When you click the link another browser window will open.

A screenshot of the CASPIE Instrument Access web interface. At the top, the CASPIE logo is on the left and the text "Instrument Access" is on the right in a large, orange, serif font. Below this, a welcome message reads: "Welcome to your personalized view of instrument applications. You are currently authorized to use at this time. Click an icon to launch an application." A camera icon is followed by the text "View Instruments" with a yellow starburst effect and a mouse cursor pointing at it. Below this, another line of text says: "You can view the instruments via web cameras. Click on the link." A "Main" header is followed by two icons: "HPLC Data Processing" and "HPLC Remote Control", each with a diamond-shaped icon containing a green and white pattern.

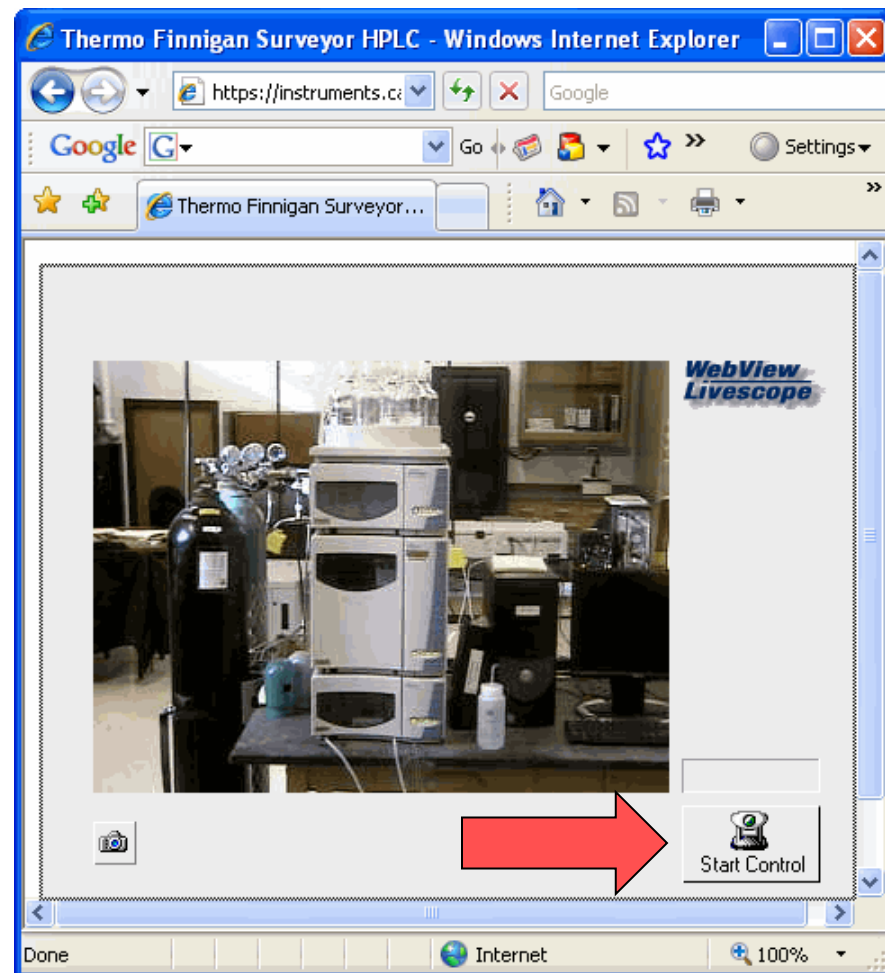
The HPLC Camera

- In the 'Instrument Cameras Available' browser window (a) click on the 'Thermo Finnigan Surveyor HPLC' link to load the camera image.
- To control the camera position click on the 'Start Control' button (b). You may have to click it twice.

(a)

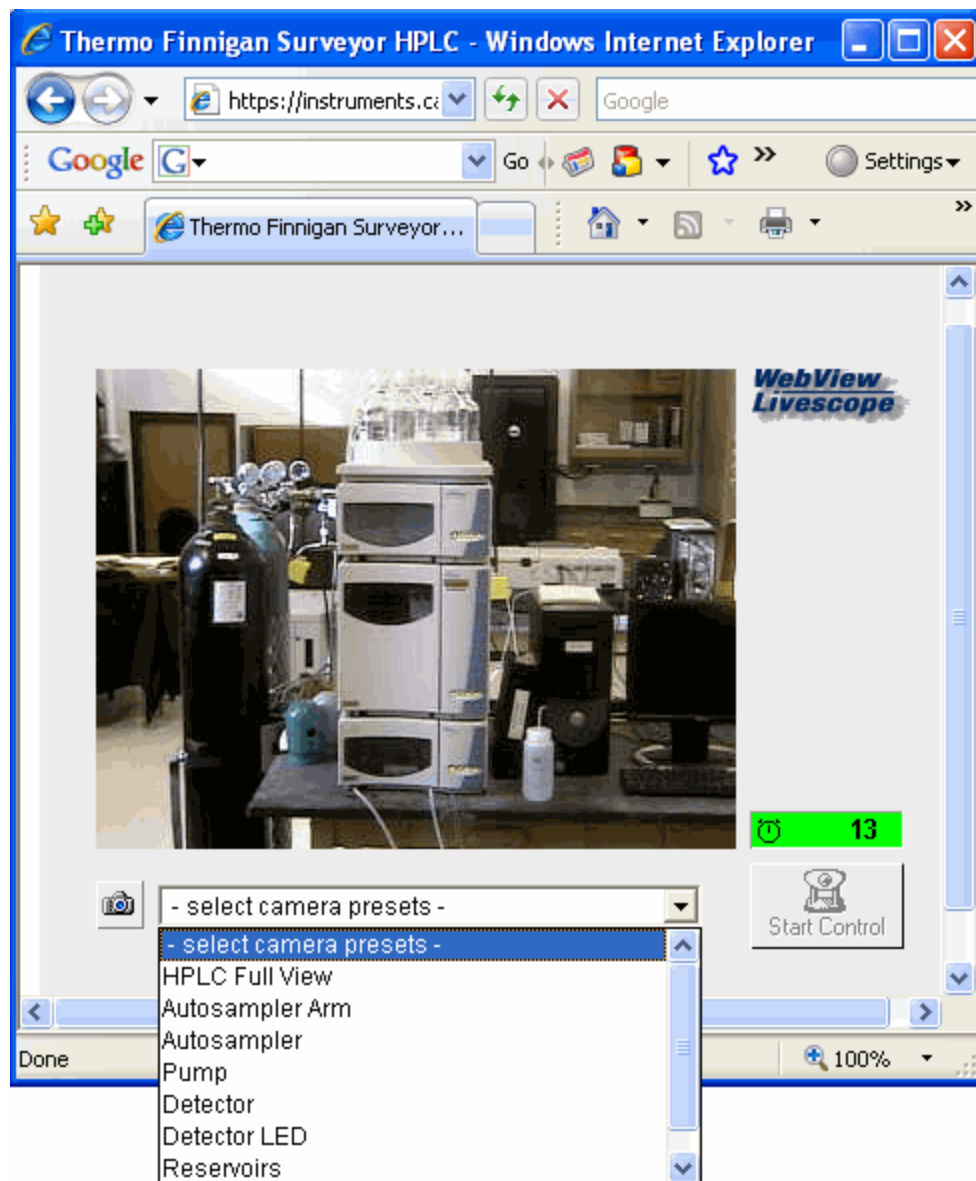


(b)



The HPLC Camera Presets

- When you have control of the camera there will be a green countdown clock above the 'Start Control' button.
- Click on the '- select camera presets' drop down and select one of the presets to move the camera to a different position.
- Only preset positions are available for viewing.



Thermo Finnigan Surveyor HPLC - Windows Internet Explorer

https://instruments.c... Google

Google G Go Settings

Thermo Finnigan Surveyor...

WebView Livescope

13

Start Control

- select camera presets -

- select camera presets -

HPLC Full View

Autosampler Arm

Autosampler

Pump

Detector

Detector LED

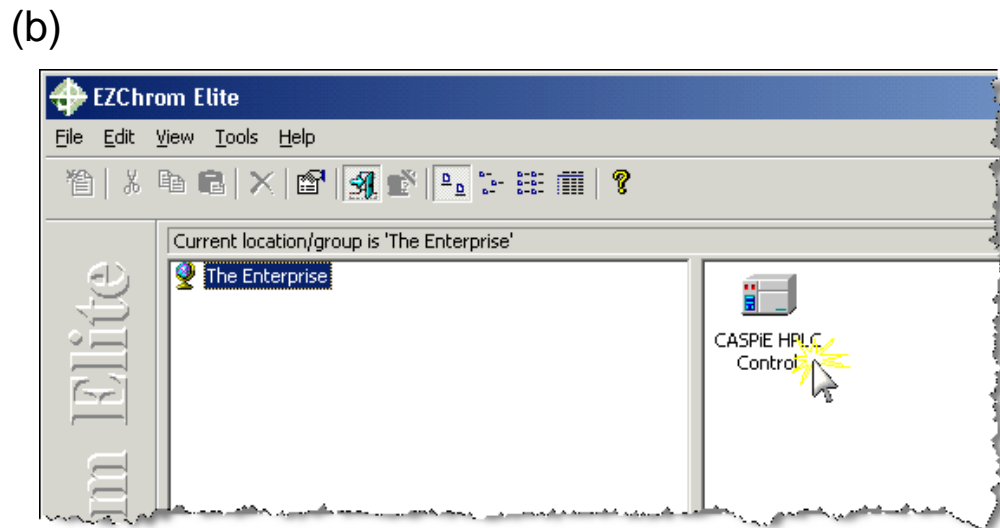
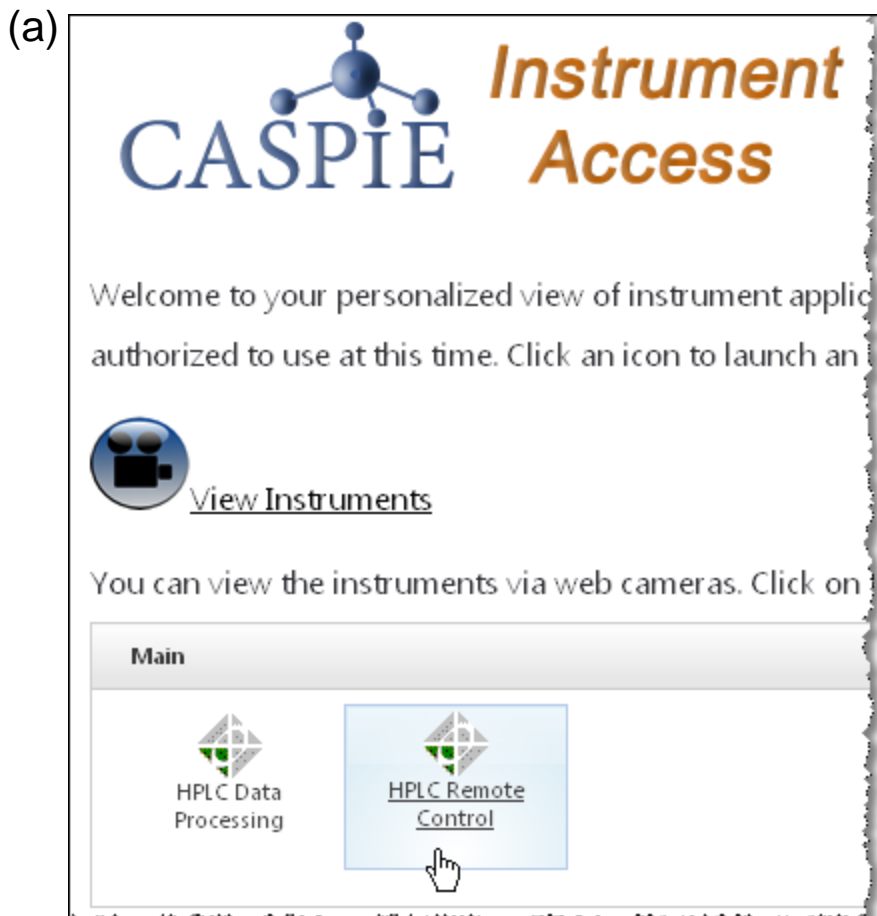
Reservoirs

Done 100%

Launch the HPLC Remote Control Software

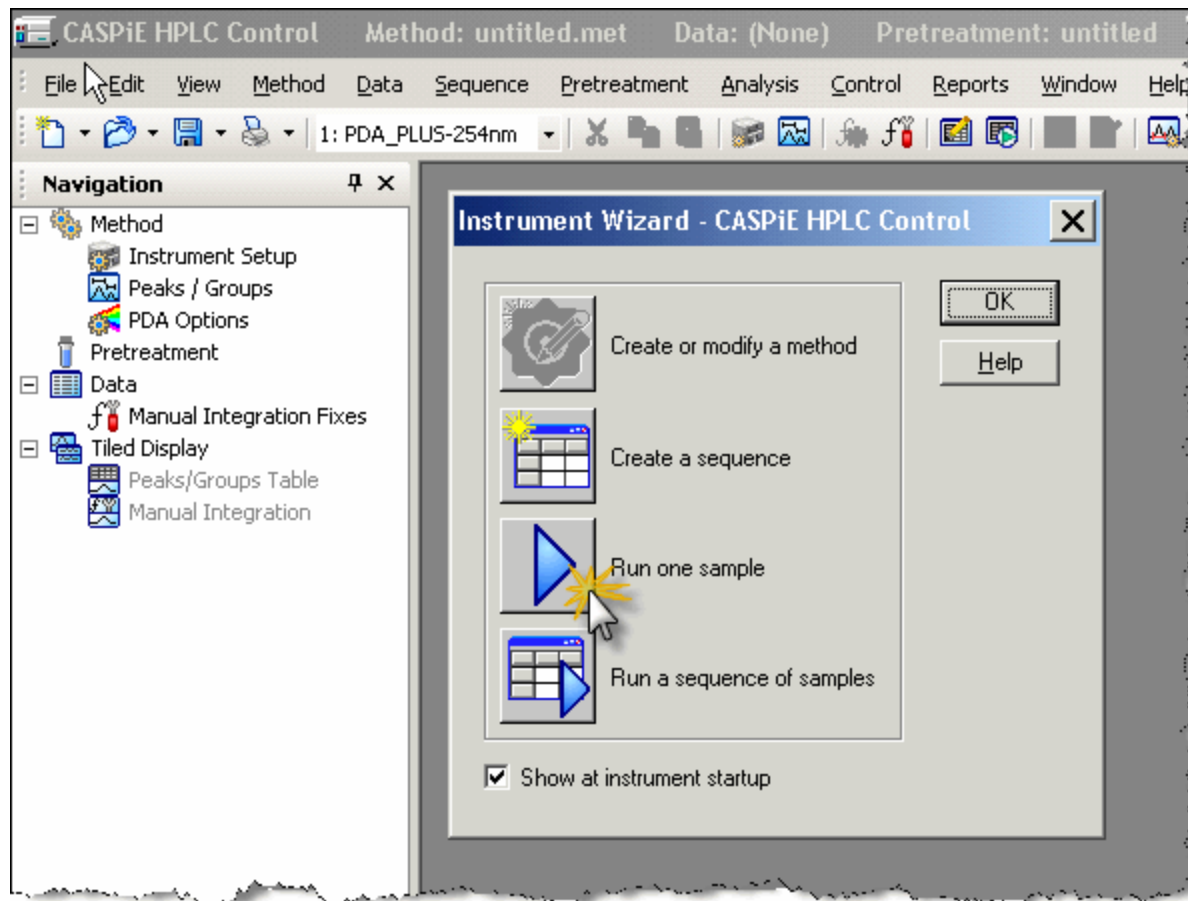


- To launch the HPLC remote control software go back to the CASPIE Web Interface browser window (a) and click once on the 'HPLC Remote Control' icon.
- After the EZChrom Elite software launches double-click on the "CASPIE HPLC Control" icon to connect to the instrument (b).



Instrument Wizard

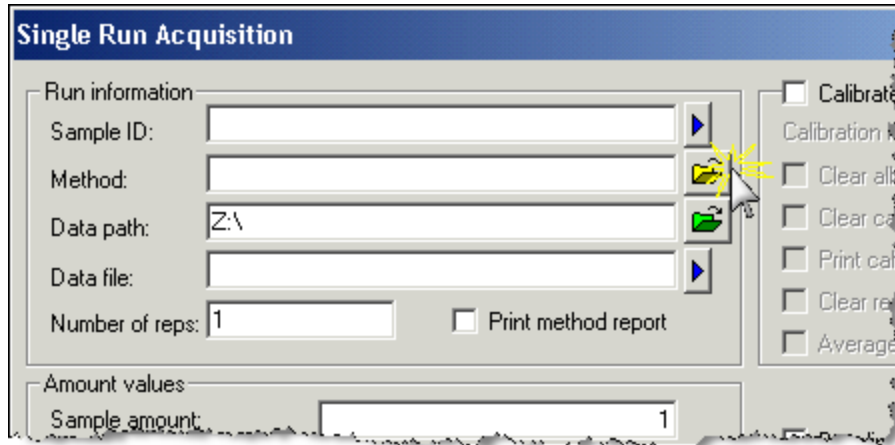
- The next screen will have an 'Instrument Wizard' window.
- Click on the 'Run one sample' icon.
- A new window will open called 'Single Run Acquisition'.



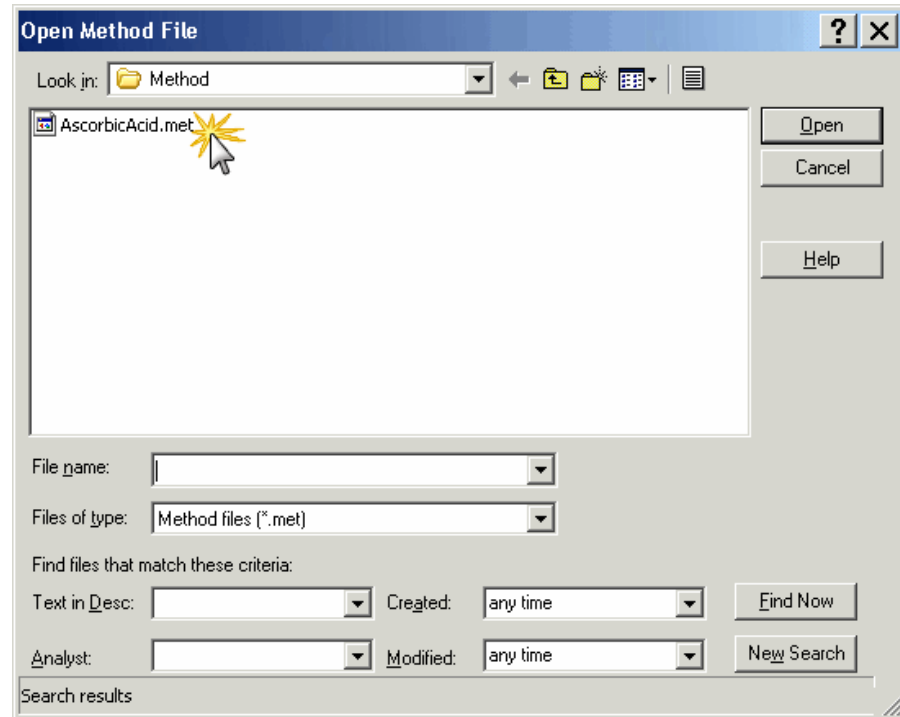
Single Run Acquisition Window

- In the 'Single Run Acquisition' window click on the file open icon to the right of the method box (a).
- The Open Method File window will open. Select the AscorbicAcid.met file and click 'Open' (b).

(a)

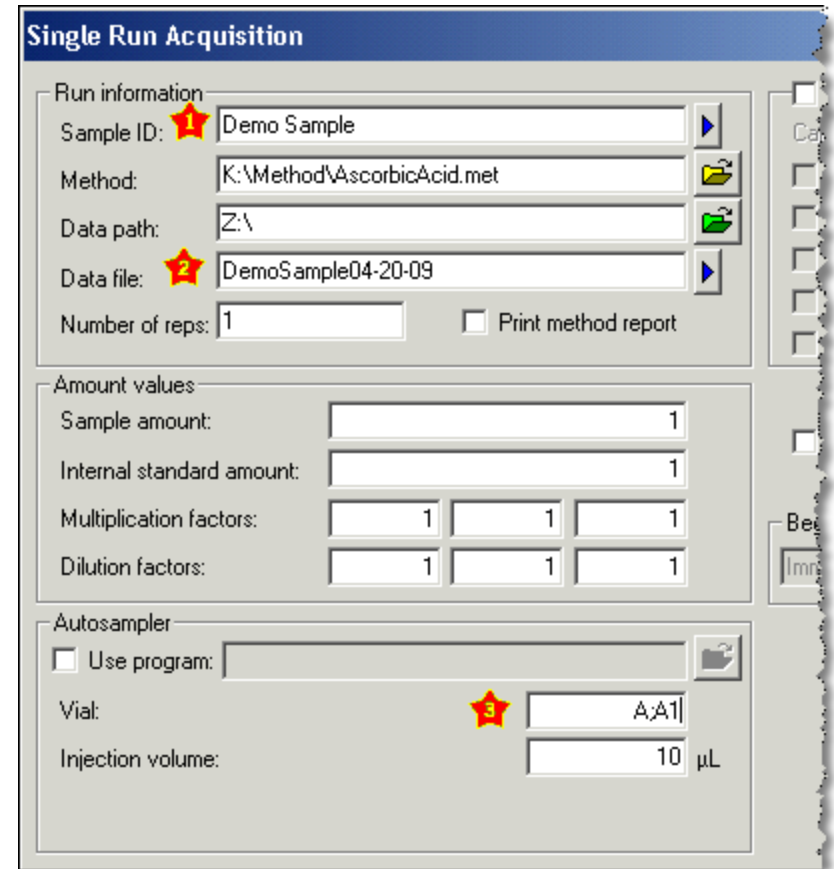


(b)



Enter Sample Information

- Enter a sample ID (1) and data file name (2) of your choosing.
- In the 'Vial' box (3) enter 'A;A1'. *Correct entry is very important because this is the location of the demonstration sample.*
- Keep the default entries in the remaining information boxes. The injection volume should be 10 μL .



Single Run Acquisition

Run information

Sample ID: ★ 1 Demo Sample

Method: K:\Method\AscorbicAcid.met

Data path: Z:\

Data file: ★ 2 DemoSample04-20-09

Number of reps: 1 Print method report

Amount values

Sample amount: 1

Internal standard amount: 1

Multiplication factors:

1	1	1
---	---	---

Dilution factors:

1	1	1
---	---	---

Autosampler

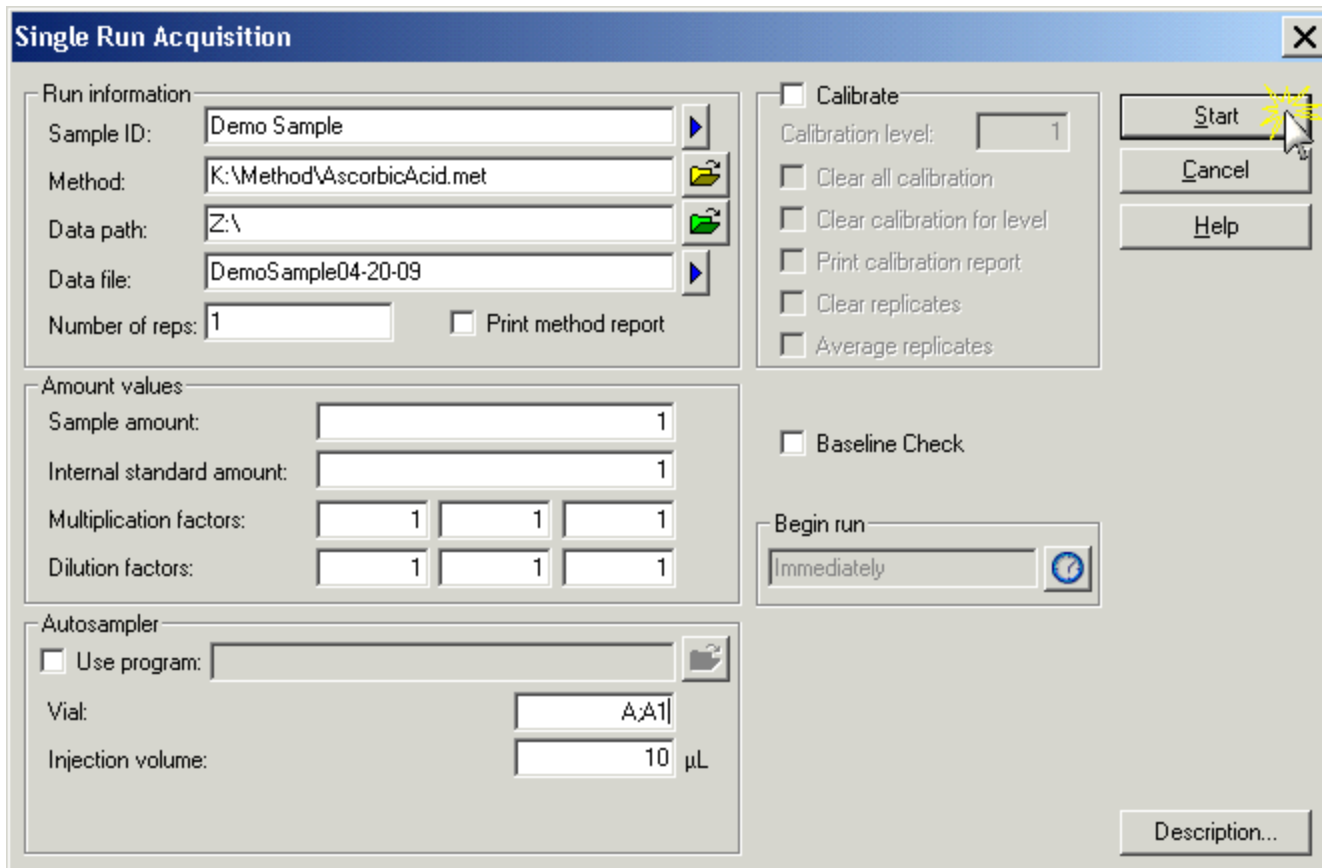
Use program:

Vial: ★ 3 A;A1

Injection volume: 10 μL

Start Run

- Double check the vial location; it should be A;A1.
- To initiate your run, click the start button in the 'Single Run Acquisition' window.



Single Run Acquisition

Run information

Sample ID: Demo Sample

Method: K:\Method\AscorbicAcid.met

Data path: Z:\

Data file: DemoSample04-20-09

Number of reps: 1 Print method report

Amount values

Sample amount: 1

Internal standard amount: 1

Multiplication factors: 1 1 1

Dilution factors: 1 1 1

Autosampler

Use program:

Vial: A;A1

Injection volume: 10 µL

Calibrate

Calibration level: 1

Clear all calibration

Clear calibration for level

Print calibration report

Clear replicates

Average replicates

Baseline Check

Begin run

Immediately

Start

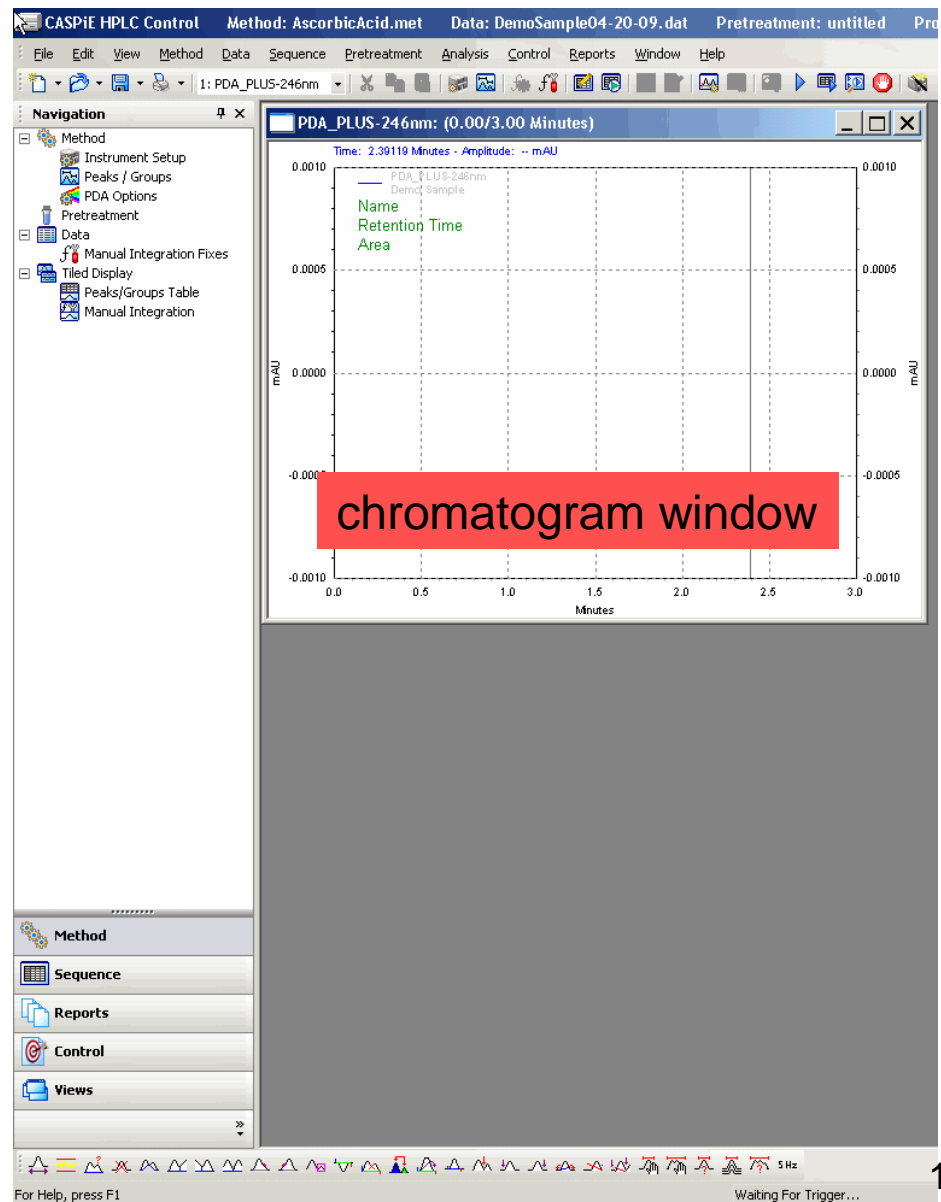
Cancel

Help

Description...

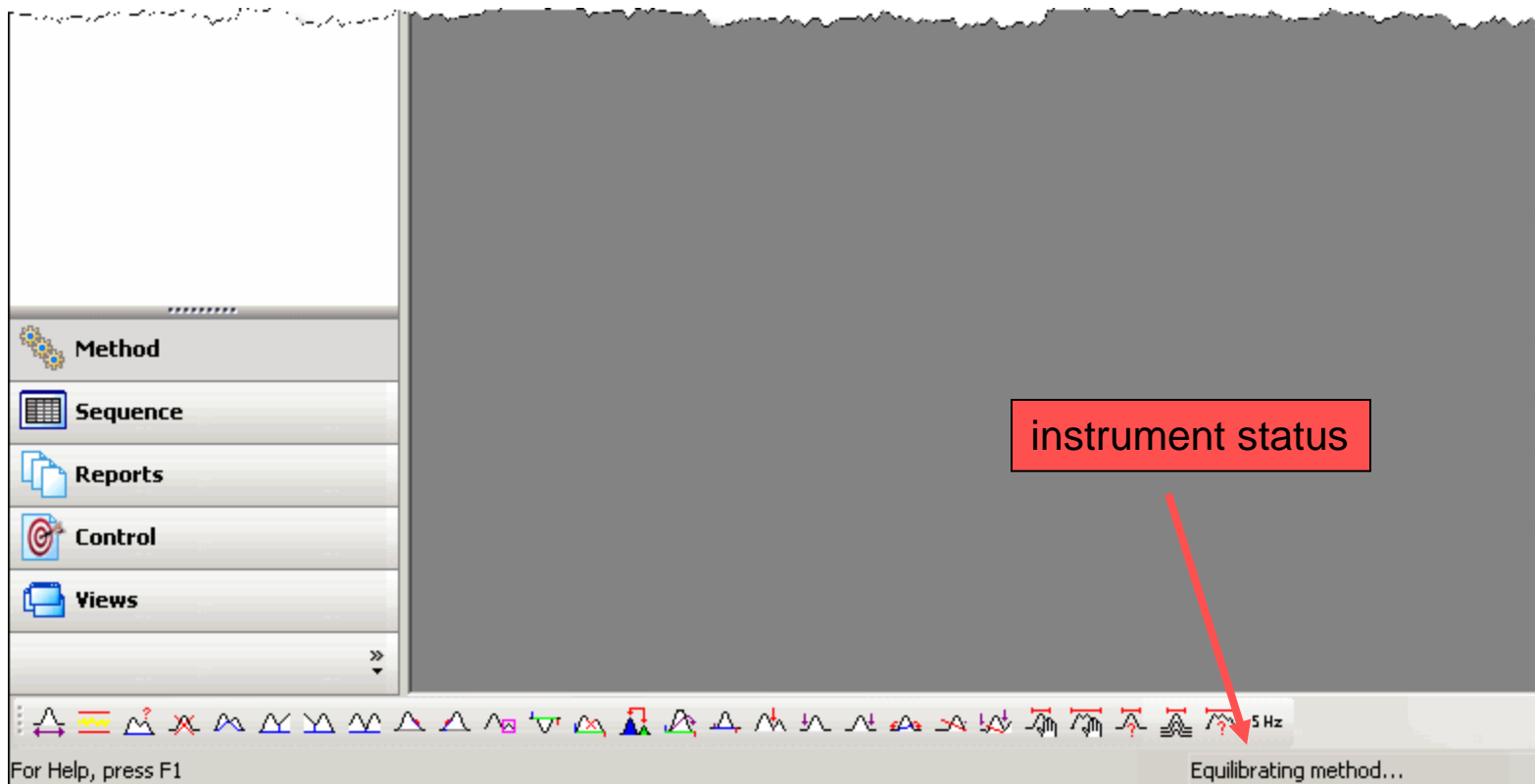
Chromatogram Window

- After the run is started a chromatogram window labeled 'PDA_PLUS-242nm' will open.
- The chromatogram window will update during the run.



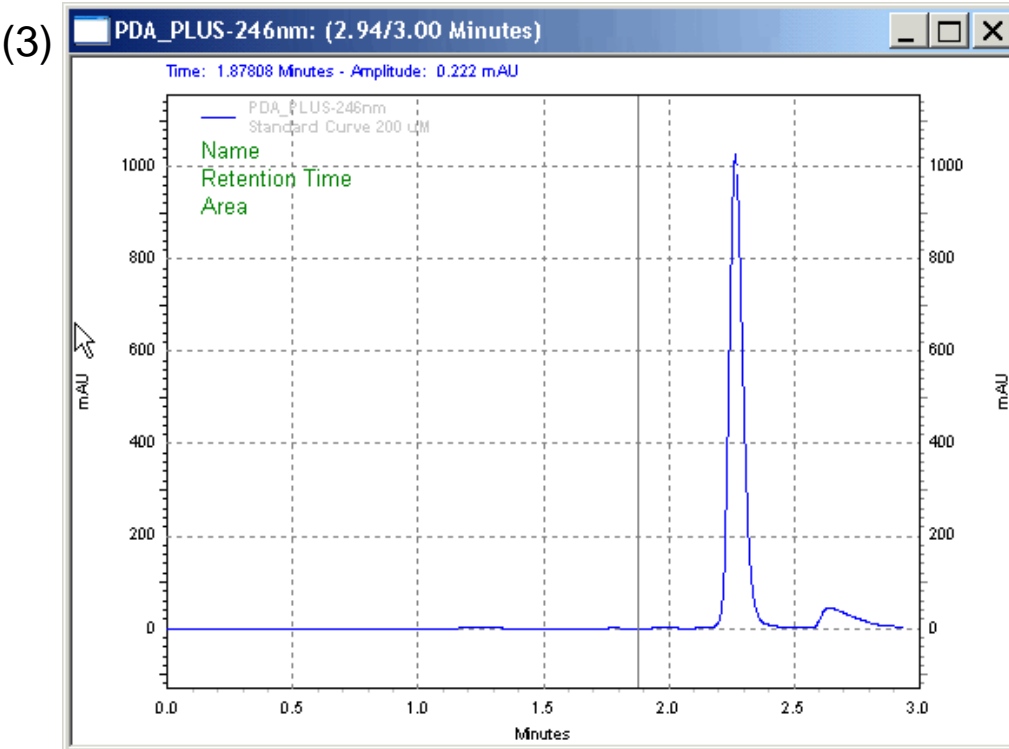
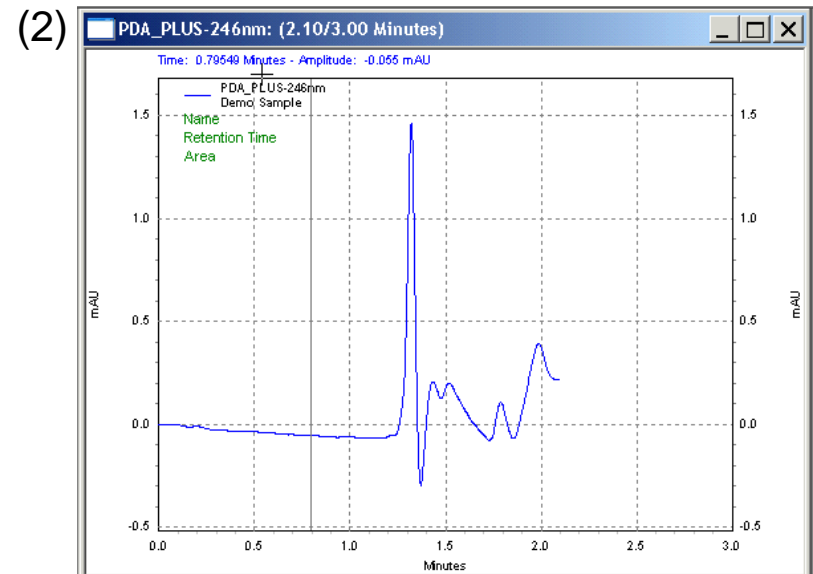
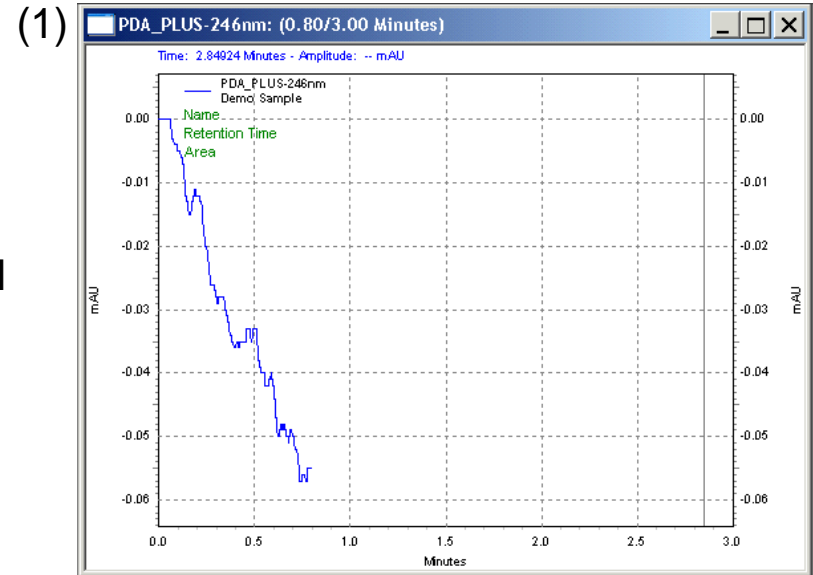
Instrument Status

- At the start of the run the instrument will take a few seconds to get the sample ready.
- The status of the instrument during a run is shown at the bottom of the screen.
- When the sample is running the status will read 'Running sample...'



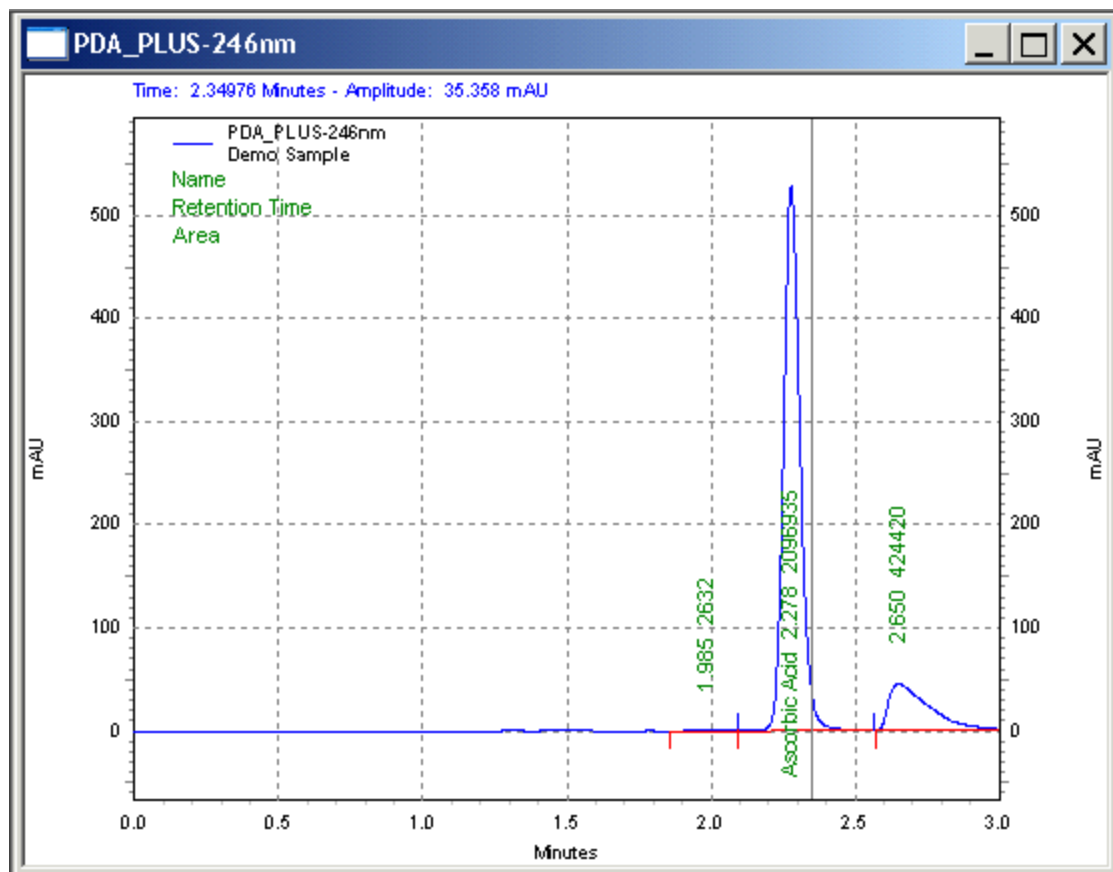
Data Collection

- It will take 3 minutes to collect the chromatogram.
- An example chromatogram collection is shown here.
- The y axis will autoscale as the maximum signal changes.



Run Finished

- When the run is finished the software will integrate the peaks and display the results.
- You are now finished collecting data and can exit the program.



Close Windows

- Remember, DO NOT make any changes to the instrument.
- Exit all EZChrom Elite HPLC software windows.

