

Gas Chromatography



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2022.07

Gas Chromatography



Gas cylinders

Sample tray

Control panel

Console





- All samples must be soluble in the elution solvent that you will use previously passed through a syringe filter or short plug of silica. (Crude reaction mixtures are not allowed for GC runs.
- Don't run amine samples. It will ruin the column inside the GC.

- Turn on the regulators on all four cylinders. Also make sure the flow controllers are open.
 1. DO NOT adjust the pressure on the regulators. They should be as follows:
 - N_2 : 110 psi
 - Air: 70 psi
 - He: 110 psi
 - H_2 : 70 psi
 2. If the tanks register below 200 psi, let the person in charge know so they can get new tanks!



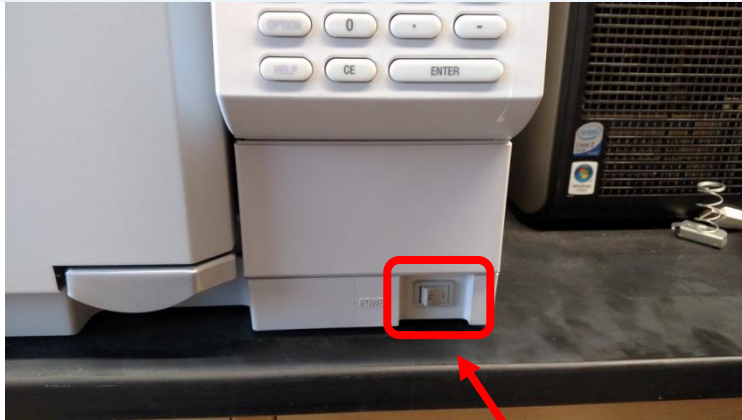
From left to right: N_2 , Air, He, H_2



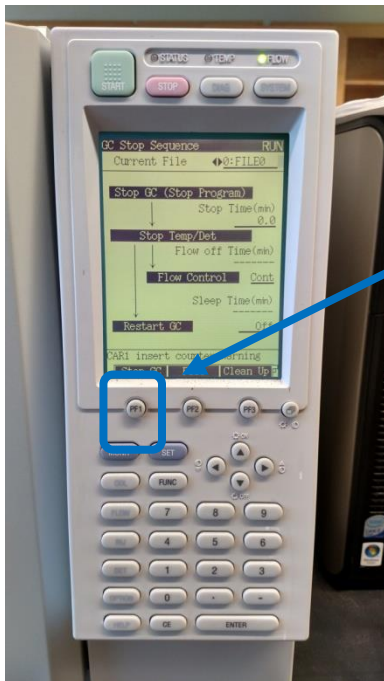
Read gas flow here!

Don't adjust

Read amount of gas here!



Power switch



PF1



Rinse Vials

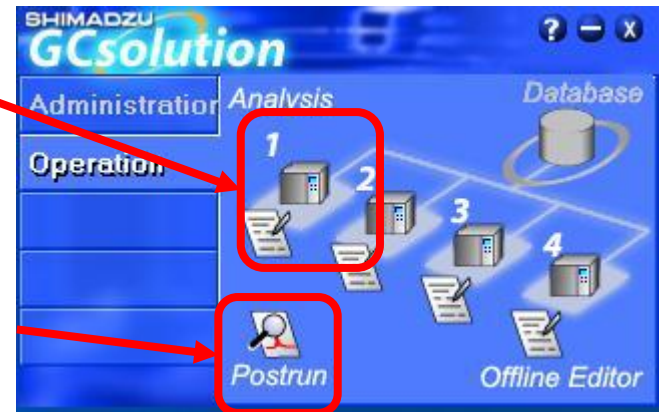
1. Power on the GC
2. After a brief initialization time, hit the button “PF1”. This will activate the heaters and automatic flow controllers.
 - If you’re getting an error message, please let those in charge know!
3. Make sure that you fill the solvent rinse vials! The first is acetone, second is empty, third is toluene, fourth is empty, fifth is acetone.

- 1) Open GC solution by clicking the icon. Log in with your user name/password.
- 2) From the “File” menu, select “Open”. Select the appropriate method (more on this later), then select “Download”
- 3) Wait until all indicator lights above the panel turn green. Then you can start your analysis.

Click here to start



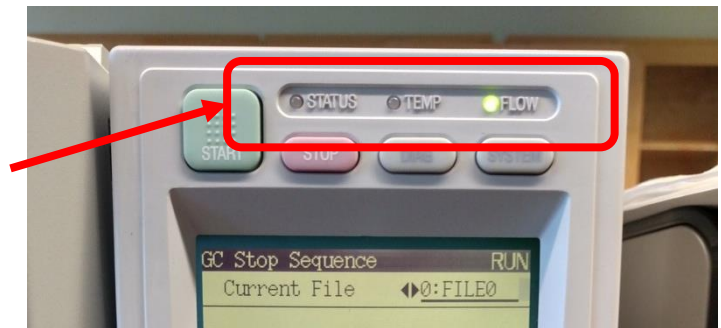
Click here to start instrument software!



Click here to look at collected data!



These guys should all be green!



Upload Your Method

The screenshot displays the GC Real Time Analysis software interface. The 'File' menu is open, showing options like 'New Method File', 'Open Method File...', 'Close Method File', and 'Save Method File'. A red box highlights the 'File' menu. A red arrow points from the 'Open Method File...' option to the text below. Another red box highlights the 'Download' button in the bottom right corner of the software window. A red arrow points from the 'Download' button to the text below.

Rate	Flow	Hold Time
0	0.0	0.00
1	0.00	0.00
2	0.00	0.00

Message	SubMessage	Date	Time	Code	User Name	Application Name	Instrument Name	PC Name
GC Instrument is not connected.		6/24/2011	12:13:00 PM	0x0609	Jacqueline	GC Real Time Analysis	GC 1	GLADYSZINSTRT

Select the desired method file from the “File” Menu

Then, once the method file is selected, hit the “Download” button to send the commands to the instrument



Starting a Batch Process

The screenshot shows the GC Real Time Analysis 1 software interface. The main window displays a table with columns: Vial#, Sample Name, Sample ID, Sample Type, Method File, Data File, Baseline Data File, Level#, ISTD Amount, Report Output, Report File, Data Description, Summary Type, and Summary Report Format File. The table contains two rows of data. A red box highlights the 'Batch Table Wizard' icon in the left sidebar, with a red arrow pointing to the 'Batch Table Wizard' dialog box that is open in the foreground. The dialog box has the following settings:

- Batch Table: New Append
- Batch Type: Line 1 Line 2 Line 1 & Line 2
- Method: Method File: C:\GCsolution\Log\1Data\Zhenxing\X\vcat

The dialog box also features a 'Batch Table Wizard' icon, a '< Back' button, a 'Next >' button, a 'Cancel' button, and a 'Help' button.

- Start by clicking “Batch Processing” from the main window.
- Then select “Batch Table Wizard” (above)
- Check whether this is a new batch or if you’re appending.
- Select Line 1.
- Find the appropriate method file to use.

- Select File-> Bakeout after running -> shutdown method.
(Run bakeout method first)
- Wait until temperature cool down to the setting temperature
- Close the program window and GC solutions window.
- Power off the GC
- Turn off all regulators and flow controllers
- Fill out the log book



- If you have several samples need to run, please schedule a date in advance
- Please make sure that you are in the lab or around when you are running GC samples
- For additional details about the GC and related software, please see the detailed group hand out or receive instrument training

