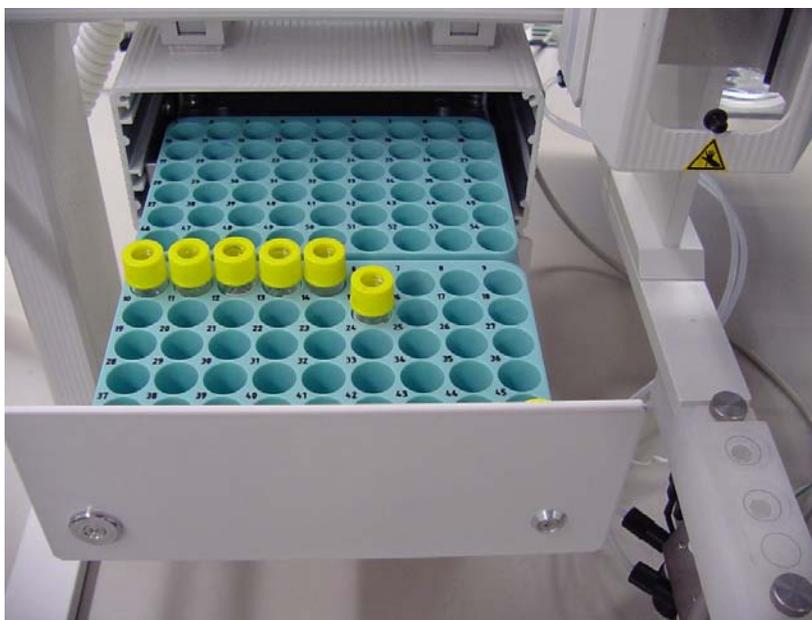


LCT operating instructions

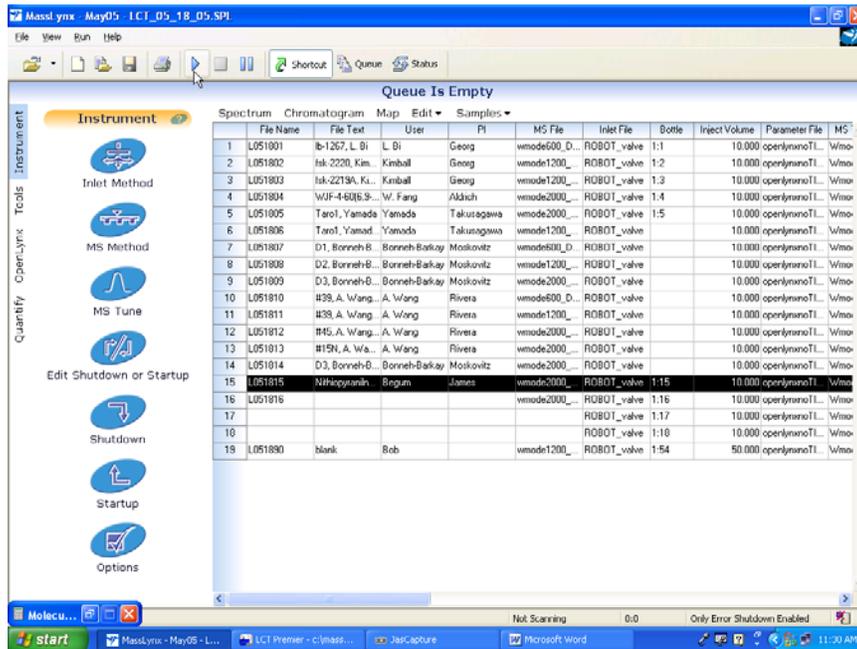
Sample prep:

1. Dilute your sample in a compatible solvent.
2. Fill the auto-injector vial with 1.5 ml of 90% MeOH 0.5% formic flow solvent OR straight CH₃CN. (Sample vials are: Sun-Sri #500-306 (Fisher #14-823-335), Caps are Fisher #14-823-336)
3. Put 1 or 2 ul of your diluted sample into the auto-injector vial. (Use only Teflon caps on the vials). **IT IS VERY IMPORTANT THAT YOU DO NOT INJECT TOO MUCH SAMPLE AS IT CONTAMINATES THE SYSTEM FOR EVERONE ELSE AND IT GENERATES ERRORS WITH THE EXACT MASS CALCULATION.**
You want to inject approximately 2 or 3 pMole/ul or 1 ng/ul of sample
(See page 3 for more information on obtaining good Exact Mass data)
4. Put the auto-injector vial into tray #1 (front tray) of the auto-injector. (Note the slot number of your sample(s)).

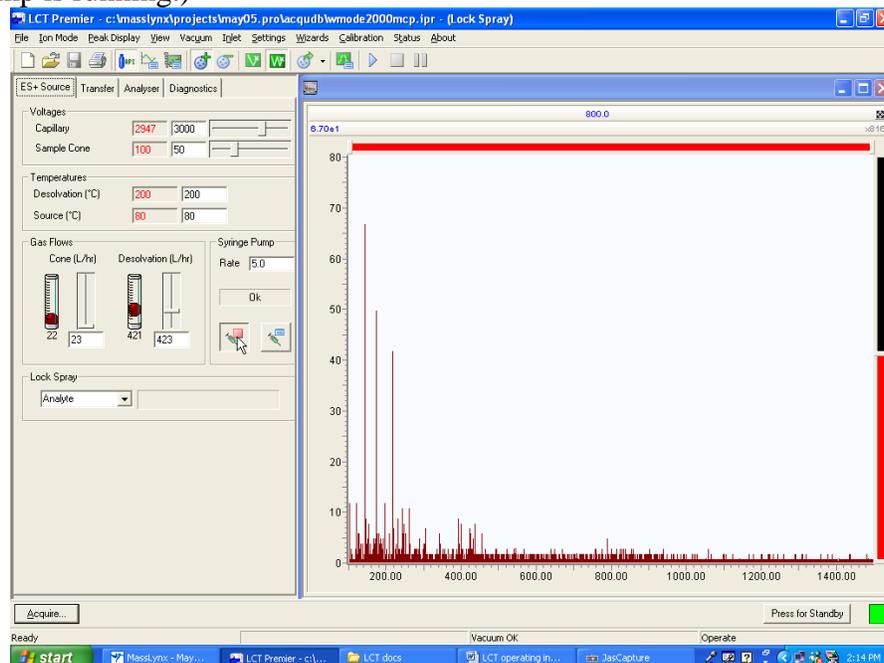


Instrument operation:

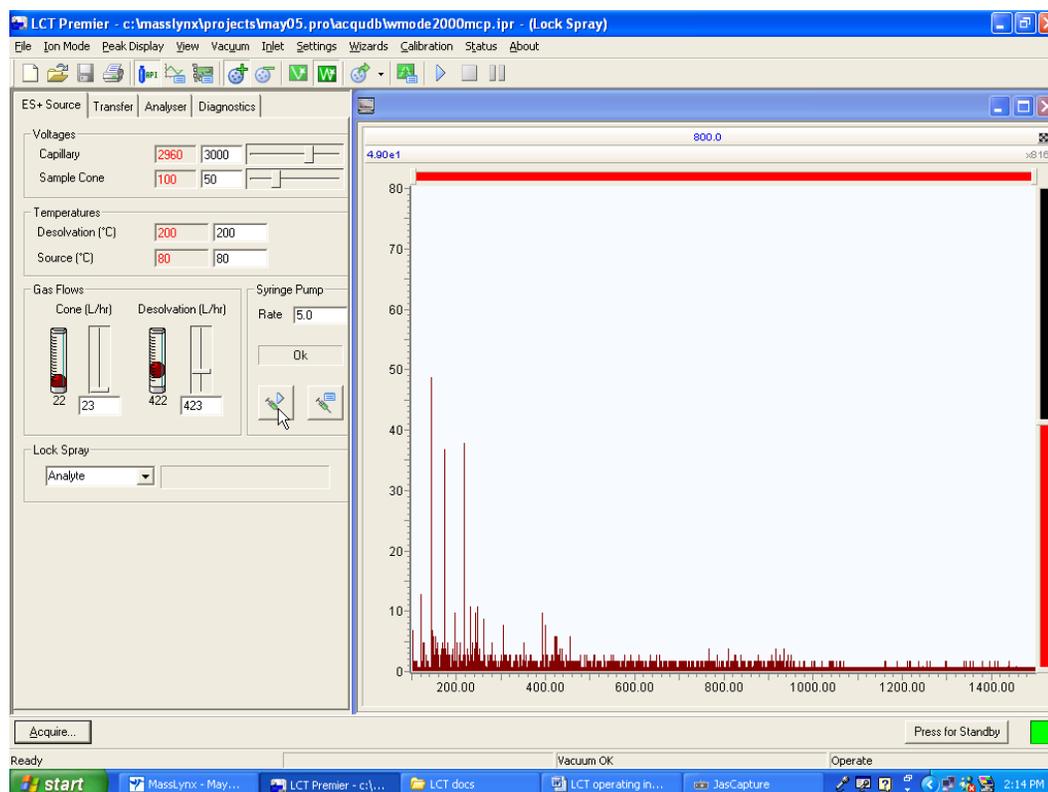
1. The MassLynx sample list page should be up on the computer monitor screen.



2. Enter the sample code in the "File Text" column. The "File Text" entry will be printed on hard copies of your data, so you should put your name there also.
3. Enter your name and the principle investigator in the "User" and "PI" columns.
4. Be sure to choose the correct MS FILE to cover the mass range that you want. The file name reflects the highest mass scanned. Choose the "DRE" files for exact mass..
5. Save the sample list page after you have entered the proper information by selecting File>Save from the menu or clicking the shortcut icon 
6. **Turn ON the Lockmass syringe pump** located on the MassLynx tune page. **DO NOT change any other settings on this page!!** (The button will turn red when the pump is running.)



7. Highlight the sample(s) that you wish to run on the sample list page and then click the blue arrow  at the top of the page to begin.
8. After each sample has finished, the data will be processed and the results will be printed out on the printer in 1008.
9. When your samples have finished running, **Turn OFF the Lockmass syringe pump on the tune page.**
10. **Be sure to remove your injector vials from the auto-injector tray.**
11. Please work up your data on the “data workup computer” located by the door in 1008 or on one of the other data workup computers in 3002, 3006, and 3007.



EXACT MASS:

This instrument will give you exact mass measurement of the peaks in the spectra; but, to get **accurate** results the following steps need to be followed.

1. The LockMass reference line, referenced in #6 above, has to be ON while your sample is being run.
2. The intensity of the major ion in a SINGLE scan must not exceed 5.0 e4 (the number at the right edge of the spectra display below the instrument and experiment notation).
3. Often it is best to average several spectra that are less than 5.0 e4 each. This usually means averaging spectra in the trailing tail of the chromatogram.
4. There are other “tricks” that we can show you. Come see us for further help with Exact Mass analysis.

Running samples made from NMR solutions:

It has been found that a 1 to 100 dilution in CH₃OH or CH₃CN (10 ul of a NMR sample in 1 ml) works well.