

Varian 500 MHz NMR Instructions for TA

1. If a user is already logged in and the VNMR software is running, click the Start tab below the spectrum or sample changer ring and check that the operator is the correct one for you (should be “chem221”). If the current operator is a research group user, shut down VnmrJ and log out of the system (go to System: Log Out at the linux desktop). Then follow step 2. below.
2. When you see the linux login screen, log in as “classes” with password “*clr2010!*”. Then start VnmrJ and select your class from the drop down list and log in with no password.
3. To begin a queue that will run all of your samples for this class, go to “***File: New Automation Run***” to start a new queue.
4. Allow students to follow the procedure on the cheat sheet that is for them. Make sure of the following things:
 - a. Do not use sample changer slot 1: this is for the CDCl₃ lock sample.
 - b. Do not put samples into the active slot (the one directly over the tube that drops into the NMR).
 - c. Students should only insert and remove samples from the sample changer when it is not moving.
 - d. Do not lean on the magnet or hang on any of the hardware on top of the magnet. The magnet is suspended on pneumatic legs and it will move if leaned on, which is hazardous to both the magnet and the person who is leaning.

The following colors apply to the sample changer display on the screen:

Yellow= waiting in line.

Blue=active and trying to collect a spectrum.

Green=done.

Red= error and this sample will not run.

Remove the sample from the sample changer, switch spinners, put the sample back in a different slot, and try again. Drag the spectrum with the “error” from the study queue window to the trash so it doesn’t hold up the queue.

Note: the sample changer has no idea which slots actually have samples in them: the colors only refer to what has happened or what will happen in any particular slot. Thus it is possible to re-use slots; just make sure that you switch samples first!

To process spectra that have already run (for example, recalculate or scale integrals), open an existing spectrum by double-clicking on the data with the black signal icon in the Study Queue box. Then go to the Process tab. Under this tab are many options for making a nice plot and reprocessing data if the auto plot is not enough.

5. When all samples are done, click on slot 1 and run a proton spectrum. Make sure that the lock sample locks and spins and that the spectrum completes successfully. ***Then shut down the VNMRJ software and log out of the system.*** Make sure that all spinners have been replaced and that all samples have been retrieved out of the sample changer. ***Please wipe off any moisture on the magnet with a paper towel to prevent pooling.***