Directions for running the HP Diode Arrays in GBAD 318
Experimental Chemistry II, CH 463

There are two different models, the one by the windows is the 8453 and the one by the door and in the middle aisle are 8452. They operate differently and have different software.

For the 8452 models:

1. Turn on the spectrometer (switch on back plane). Wait until the light on the top right side indicates that the instrument is ready (may take several minutes and you will hear the clicking of the shuttering several times). When it is ready go to step 2.

2. Turn on the PC and log in as either Chem463 or GBAD318 on the science server (you know the password).

3. Open the OLIS software. This has some error flags that show up - disregard these by hitting okay and move on. Go to the Instrument tab and sellect Diode Array. This will reinitialize the optical bench.

4. This sofware has two parts or modes, the data collection window and the data analysis window. Once you run a spectrum, you will be prompted to post the absorbance data to the analysis window. Use the icon in the upper right of the menu to switch back and forth between these two modes.

5. Set the acquisition mode to "scan" and use the wavelength range suggested in the lab manual.

6. Collect a Reference scan on just air. Put in the empty clean, dry cuvette and collect a Sample scan .When prompted post this data. Save the absorbance spectrum of the cuvette by selecting the curve (left click) and then right click-save as ASC (text) and again as XLS. Put this on the harddrive and also on the T drive in your folder. The reference scan stays in memory until you change it.

7. Continue with the directions in the lab manual.

For the 8453 Model.

1. Follow the start up directions on the laminated card next to the instrument.

2. Once the green light on the front of the instrument is lit, turn on the PC and Log on as either Chem463 or GBAD318. Wait until the CAGboot server is running (will see on bottom applications bar).

3. Open the online UV HP Agilent chemstation software.

4. Make sure that the deuterium lamp is selected (there maybe a CH463 method already setup) Load this method.

5. Use the buttons on the lower left of the screen to scan the blank and then the sample. The blank is stored in memory until you change it.

6. Collect a Blank scan on just air. Put in the empty clean, dry cuvette and collect a Sample scan The result will be displayed.

7. Save the absorbance spectrum of the cuvette by selecting the curve (left click) and then go to File Export selected spectrum as a .WAV format. Put these on the harddrive and the T drive. Also do a File Save Sample as an .SD format.

8. Follow the directions in the lab manual for the rest of the scans.

Notes on opening files in GRAMSAI for curve fitting:

From 8453 HPChemStation software files:

Open the .WAV file as HP_8452 Spectrometer ASCII Data File. If no labels on the x and y axes, go to File, Trace Information and set X axis to nm and Y axis to AU. Then follow the directions in the lab manual on curve fitting strategies.

From the 8452 OLIS software files:

Open the .TXT file as ASCIIXY DATA PAIR Format (Non Even X Spacing). If this doesn't work try some of the other ASCII options. If needed check with an instructor.
Once open, if no labels on the x and y axes, go to File, Trace Information and set X axis to nm and Y axis to AU. Then follow the directions in the lab manual on curve fitting strategies.