Hitachi F-2000 Spectrofluorimeter
Updated May 27, 2008

Instrument instructions can be found at:
http://academic.bowdoin.edu/chemistry/resources/instructions.shtml

If you have any problems with the instrument or would like to get trained, please contact Celeste Moody
(725-3756 / cmoody@bowdoin.edu / Druckenmiller 256)

1. Protocol
   a. Read instructions carefully before using instrument. Reading the bold sentences in each category will tell you what you need to know to run the instrument.
      i. Bullets are under the bold sentences when more detail is required.
      ii. At the end of the instructions is a frequently asked questions/troubleshooting section.

2. Startup Procedure
   a. Switch Power button on.
   b. Press “Xe Lamp Start” button to ignite the Xe lamp.
      i. Check to make sure the “Xe Lamp” light is lit - located below the screen.
   c. Switch Main button on.
   d. Let the lamp warm up thirty minutes before running your sample.
   e. Enter sample information in F-2000 log sheet.

3. Edit Method
   a. Set parameters for a wavelength scan
      i. Press “2” for WL Scan. Press Enter button.
      ii. Press “1” for Test Setup. Press Enter button.
         1. You will now be on right side of screen. Use the arrows to change the parameter selected. Once selected enter a new value and press Enter.
         2. Ex scan – enter the starting (Ex Start WL) and ending (Ex Stop WL) values for Ex.
         3. Em scan – enter the starting (Em Start WL) and ending (Em Stop WL) values for Em.
         4. Adjust the y-axis intensity scale – Up Scale and Lo Scale.
         5. Adjust scan speed.
         6. Hit Return button to return to left side of screen.
   b. Under “Go To λ” (on the keypad) there is an Ex and Em key.
      i. The current settings are displayed in the upper right part of the screen. There are three values highlighted – the first two are the Ex and Em settings, the third is the current intensity level reading.
      ii. Ex – wavelength you will excite. Enter new value and press Enter.
      iii. Em – wavelength you will collect emission. Enter new value and press Enter.
4. Collect Spectrum
   a. Load your sample.
   b. Hit the “Forward” button.
   c. To do an Emission scan, hit the green start key that says “Em”.
   d. To do an Excitation scan, hit the green start key that says “Ex”.
   e. When scan is finished, remove your sample.

5. Analyze Spectrum
   a. Press “1” for Trace. Press Enter button.
      i. Use the left and right directional arrows to move the cursor along the spectrum and record the wavelength and intensity of the peaks.
   b. Press “2” for Rescale. Press Enter button.
   c. Press “3” for Peaks. Press Enter button.
      i. Displays one peak at a time. Use the arrows keys to scroll through the peaks.

6. Print Spectrum
   a. Press “4” to print your spectrum.

7. Shutdown Procedure
   a. Switch the Main button off.
   b. Switch the Power button off.
   c. The lamp will turn off, but it still needs to be cooled by the fan, so turn the Power button on after a couple of seconds.
   d. In about fifteen minutes, turn the Power button off.