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## Using the Nicolet IR100 FT-IR

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### *Getting started*

Make sure the system is on and active by moving the mouse, found to the right of the spectrometer. If the cursor doesn't move on the screen, then restart the spectrometer by turning the power off at the back of the device, waiting for about 10 seconds, and turning the power back on.

Check the spot in the lower right corner on top of the spectrometer. It should be blue not pink. If it is pink, please let your instructor know so that the dessicant can be changed when convenient.

### *Recording an IR spectrum*

1. Clean the shiny silver plate with a KimWipe moistened with acetone.
2. Clear any data from previous experiments and do not save previous data. To do this, in the display window, click:

View | Clear All Spectra | No

3. Collect a background sample from the air. Click:

Collect | Background

A virtual keyboard should appear on the screen.

Click the "ENTER" key icon on the right side of the virtual keyboard:



Wait for the spectrometer to collect the background data.

4. Place your sample onto the spectrometer.

*Note:* Samples are placed on the slit in the center of the shiny silver plate.

If the sample is a liquid, place one or two drops on the slit in the center, *or*

If the sample is a solid:

- a. place just enough solid to cover the slit in the center
- b. swing the pressure arm over the sample
- c. turn the knob until it clicks

4. Collect the data from your sample. Click:

Collect | Sample | click the ENTER key on the virtual keyboard

Wait for the spectrometer to collect the data.

Your sample spectrum will be in red on the top of the screen.

*Note:* If your sample was a liquid, verify that it did not completely evaporate while collecting data. If it did completely evaporate, repeat steps 3-4) using one or two more drops of liquid than in your first attempt.

5. Correct the spectrum.

Click: Process | Apply ATR Correction

Click: Process | Correct Baseline

6. Remove the air sample from the screen then print your spectrum

Click the lower (background) spectrum. It should now be red.

Click: View | Clear Spectrum | No

Click: File | Print | Click: Landscape Click: OK

7. Clean the silver plate with a KimWipe moistened with acetone. If you had a solid sample, return the pressure arm to the up position by turning the knob, swing the pressure arm aside, and clean the pressure plunger that was in contact with your sample as well as the silver plate.

8. You are done!