Nicolet Avatar Software Guide

- 1. Open Omnic Software with the icon on the desktop
- 2. Click ok to Smart Accessory Change.
- 3. To change the experimental parameters click Expt Set

Experiment Setup - C:\My Documents\OMNIC\Para	m\default.exp	? ×
Collect Bench Quality Advanced Diagnostic Configure		
Estimated time for this collection: 0D:00:19 No. of scans: Resolution: 4. Data spacing: 1.929 cm-1 Final format: %Transmittance Correction: H20 and CO2 Automatic atmospheric suppression Preview data collection Use fixed Y-axis limits in collect window Min: 0.00 Max: 2.00	File Handling Save automatically ✓ Save interferograms Base name: ✓ C:\My Documents\OMNIC\autosave\0001.spa Background Handling Collect background before every sample Collect background after every sample Collect background after [1000] minutes Use specified background file: C:\My Documents\OMNIC\SpectraUJ Browse: Collect [256] scans for the background	
Experiment title: default Help Open Save Save As	Experiment description: For salt plates or KBr pellets OK Cancel	

- a. You can change the number of scans and the resolution here. On the 8th floor FTIR <u>DO NOT</u> check the box next to "automatic atmospheric suppression" since this instrument cannot do that.
- b. On the right side you can change when the instrument requires a new background to be run (typically run before your first sample and then every hour or as needed).
- 4. Click Collect Background to collect for automatic subtraction. You do not need a new window.
- 5. Insert your sample into the holder.



- 6. Click on Collect Sample ^{Col Smp} to collect the sample spectrum.
- 7. Enter a title (optional) and click OK.
- 8. After it is done collecting it will ask if you want to "Add to Window 1?" Click Yes.

9. Baseline Correction:



- a. Click on baseline button. Bsln C
- b. Click on 4-5 peaks with highest %T.

- 10. Find Peaks:
 - a. Click Find Pks to automatically find peaks.
 - b. Click to move the threshold line so that it intersects peaks, but do not put it high enough to pick up noise/baseline.
- 11. Zooming:
 - a. To zoom: box out region of interest and then click in the box.
 - b. To return to full spectrum: double click on the full spectrum at the bottom of the screen.
- 12. Click on File and "save as" to save your spectrum.
- 13. Click on the print icon to print the spectrum with labels

ATR Procedure

- 1) USE ONLY ETHANOL OR WATER, NEVER USE ACETONE.
- 2) USE ONLY THE COTTON SWABS AT THE SYSTEM TO CLEAN THE LENS/CRYSTAL, DO NOT USE KIM WIPES!
- 3) NEVER SCRAPE THE LENS WITH A SPATULA AND BE GENTLE AND CAREFUL IF YOU ARE LOADING A POWDER WITH A SPATULA.
- 4) NEVER USE THE COMPRESSION SCREW WITH LIQUIDS.
- 5) SOLIDS MUST EITHER BE FLAT SURFACES OR BE GROUND INTO FINE POWDERS. DO NOT USE COARSE, CRYSTALLINE POWDERS, THEY WILL HARM THE LENS.
- 6) ASK SARA OR JOE TO SHOW YOU PROPER RECOVERY TECHNIQUES IF YOU NEED TO RECOVER YOUR SAMPLE.