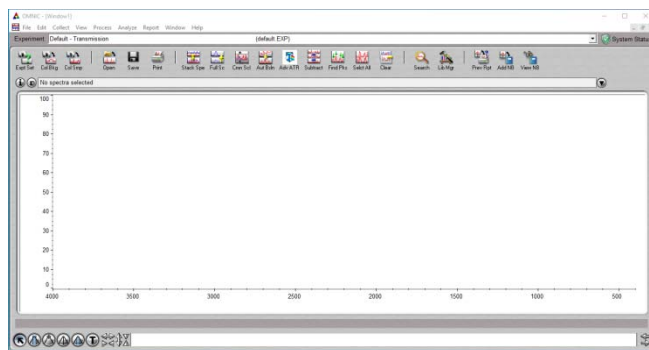# Nicolet iS10 FTIR Protocol

Prepare for the IR spectrum Acquisition.

1. Turn on the computer (if it is not already on), and double click "OMNIC " icon on the desktop to open the FTIR acquisition window.
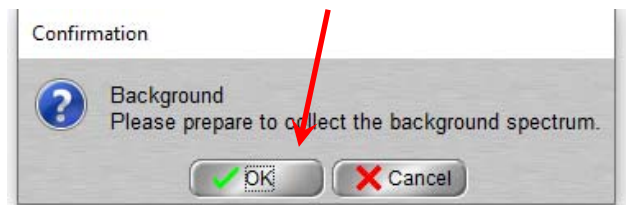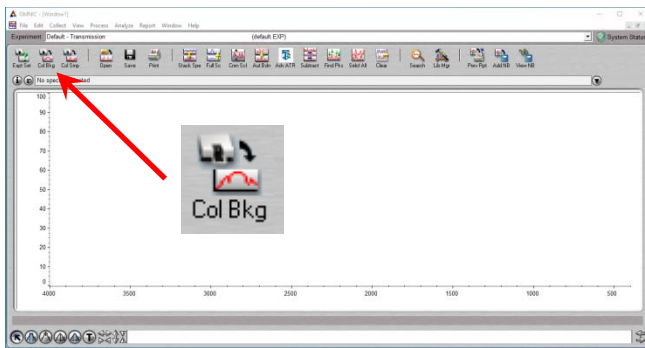

2. Cleaning the ATR module: Using Isopropanol moistened Kimwipe to gently wipe the surface of ATR top-plate and the screw above.
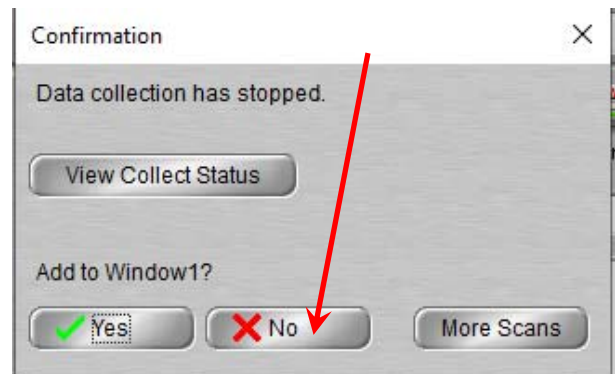
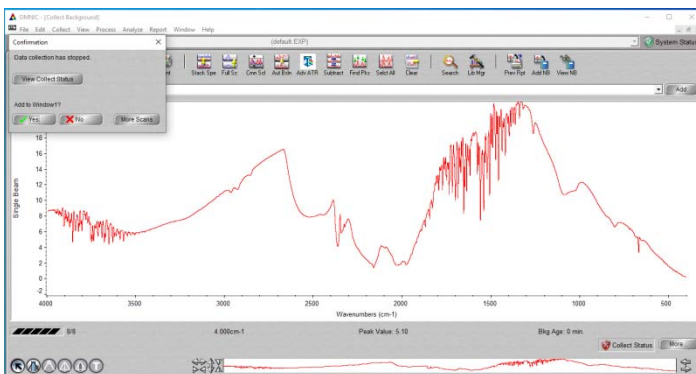

Do not directly apply cleaning liquid on the surface !
Never scratching the crystal surface!!!

Collect the background spectrum

1. Click "ColBkg" icon to start acquiring current background spectrum.
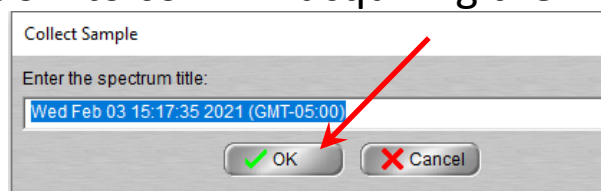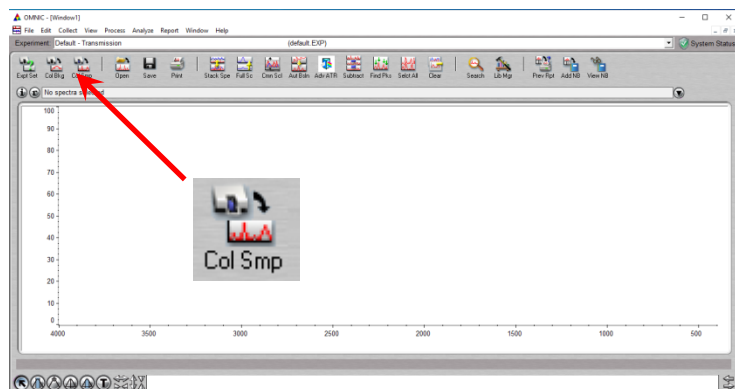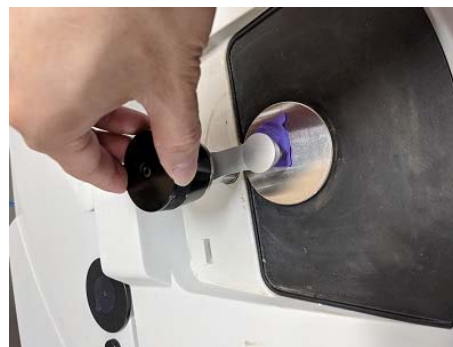2. Click "OK" in the popup window to confirm.

3. The background spectrum should look like the ones below, which only contains the CO2 and the water peaks.
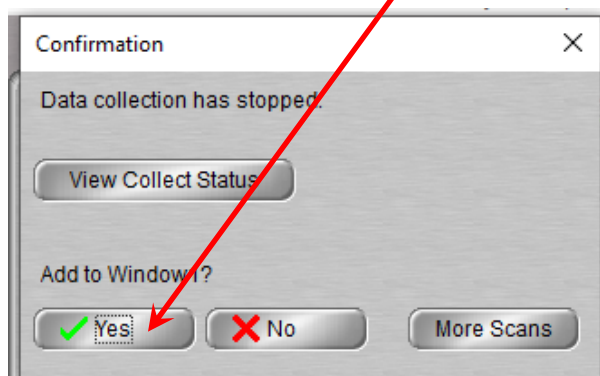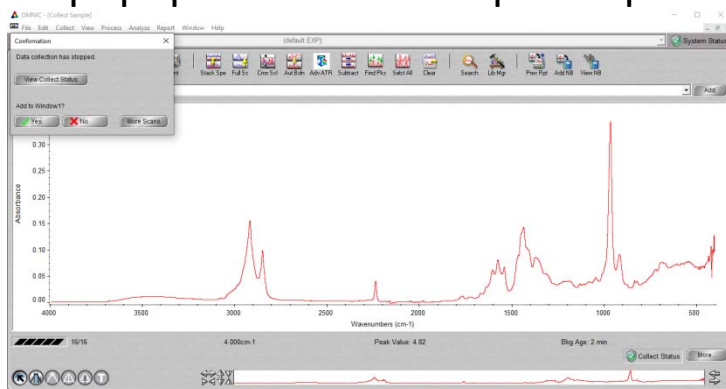4. In the next popup window, Click "No" to not add the background spectrum to the acquisition window.

Collect a sample spectrum

1. Apply a small amount of sample on the surface center. (Make sure not to scratch the surface with the spatula if you use one!)

2. Lower the ATR upper screw handle by turn it clockwise until you feel the "CLICK".

3. Now click "ColSmp" icon to start acquiring the sample spectrum.

4. Click "OK" on the first popup window for spectrum title, and click "OK" again on the next popup window to confirm acquiring the sample spectrum.
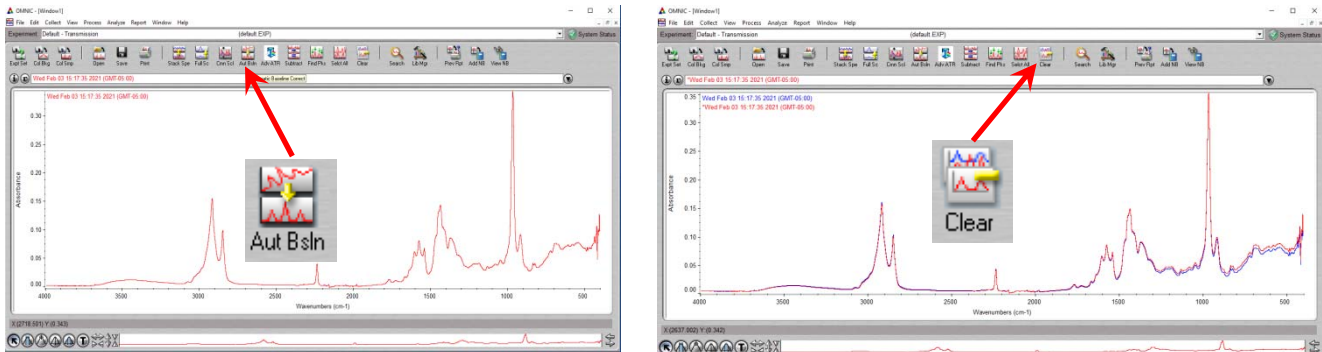

5. When the spectrum acquisition completes, click "Yes" in the next popup window to keep the spectrum.
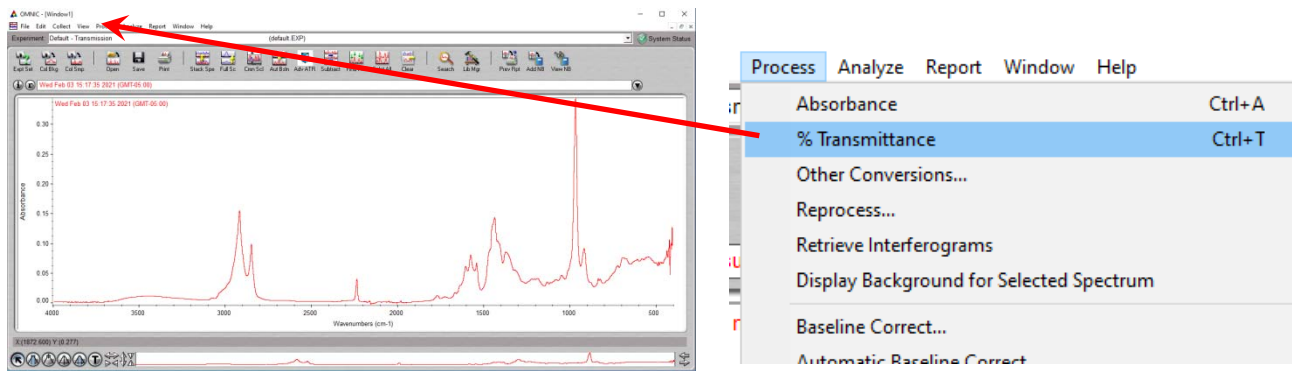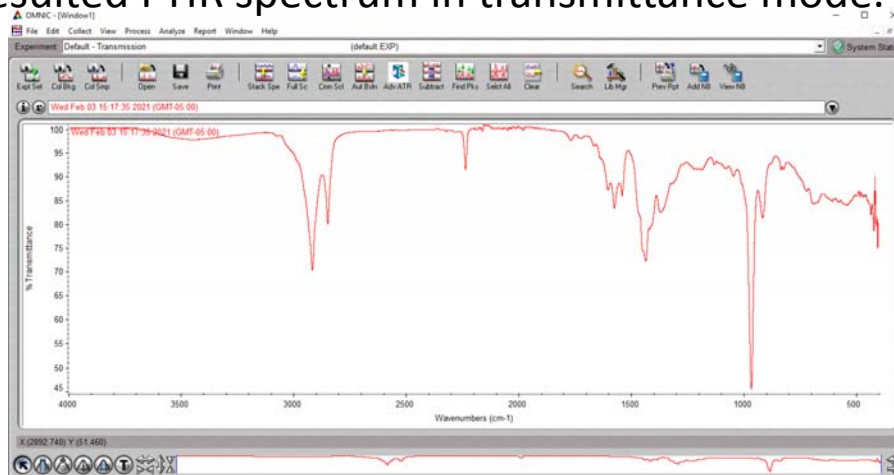
Substract backgroud from sample spectrum

1. If needed, the background absorbance can be substracted from sample spectrum by click "AutBsln" .

2. Then click "Clear" to get rid of the original spectrum and leave only the baseline corrected one.

3. Finally convert the spectrum from Absorbance mode to traditional Transmittance mode from the "Process" pulldown menu.
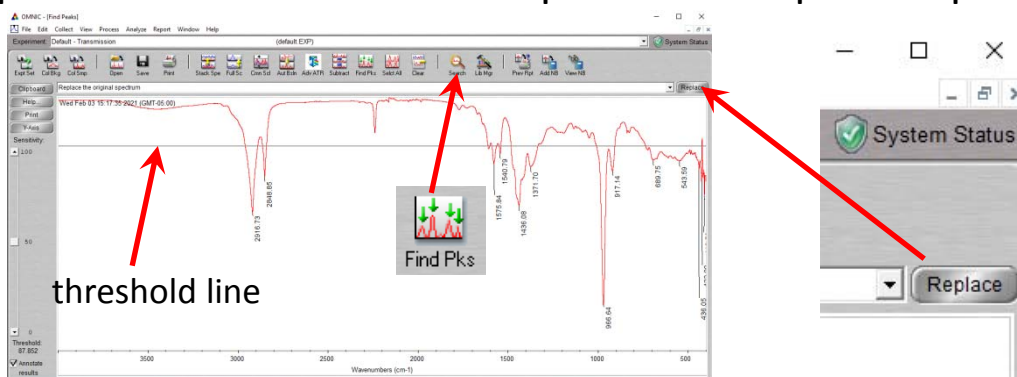

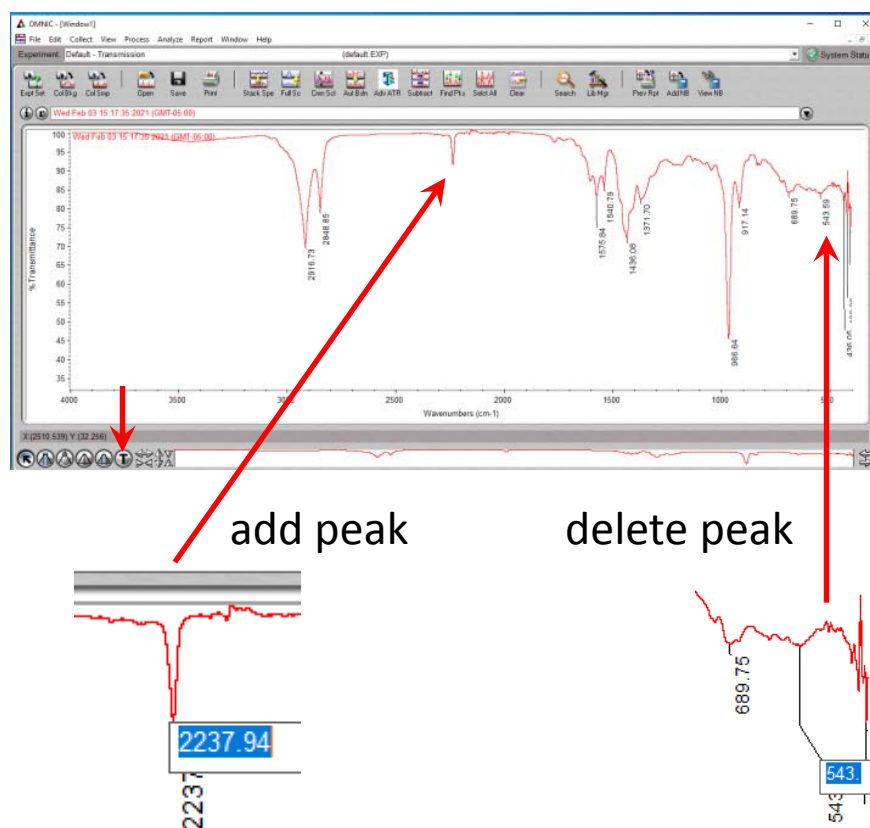4. The resulted FTIR spectrum in transmittance mode.

Pick peaks

1. You can pick peaks by click "Find Pks". The peak threshold is indicated by a horizonal line and can be adjusted by clicking on the spectrum. And then click "Replace" to keep these peaks.
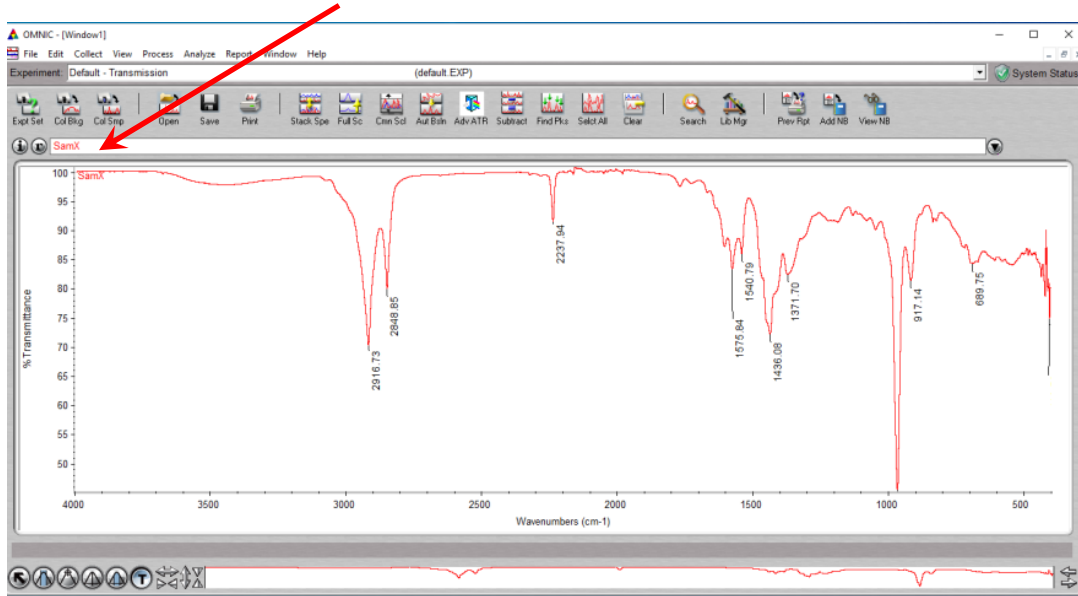

2. You can further manually add more peaks or delete unwanted peaks. First click "T" sign at down left corner, then click the peak you want add and press ENTER, it will add wave numbers for that peak. If you click the current peak wave number, then press DELETE followed by ENTER, it will delete that peak label.

add peak   delete peak

Print and Save Spectrum

1. If you are satisfied with your spectrum, you can now type in your sample name and other information in the title space.

2. Print the spectrum by selecting Brother HL-L8260CDW series printer if prompted.
3. Save the spectrum as "CSV" format if you want processing the data with Microsoft Excel later.