Nicolet 380 FTIR Spectrometer (GERB 145)

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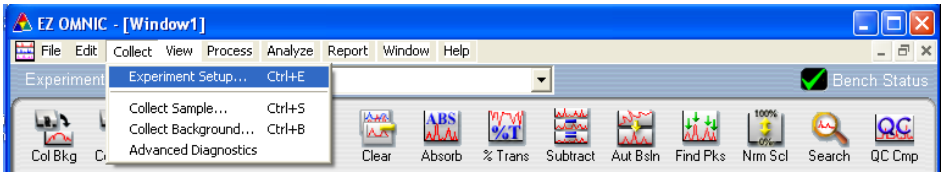
Transmission spectra

1. Open EZ OMNIC software

2. Choose Collect → Experiment Setup from top toolbar

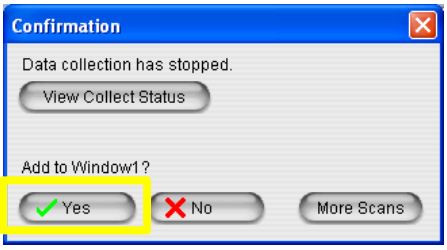


3. Ensure the "Collect" box in the Background Handling section is selected and set to 64 scans

4. Ensure no sample is loaded into the spectrometer. Allow sample compartment to purge with nitrogen for 1 minute before beginning background measurement.

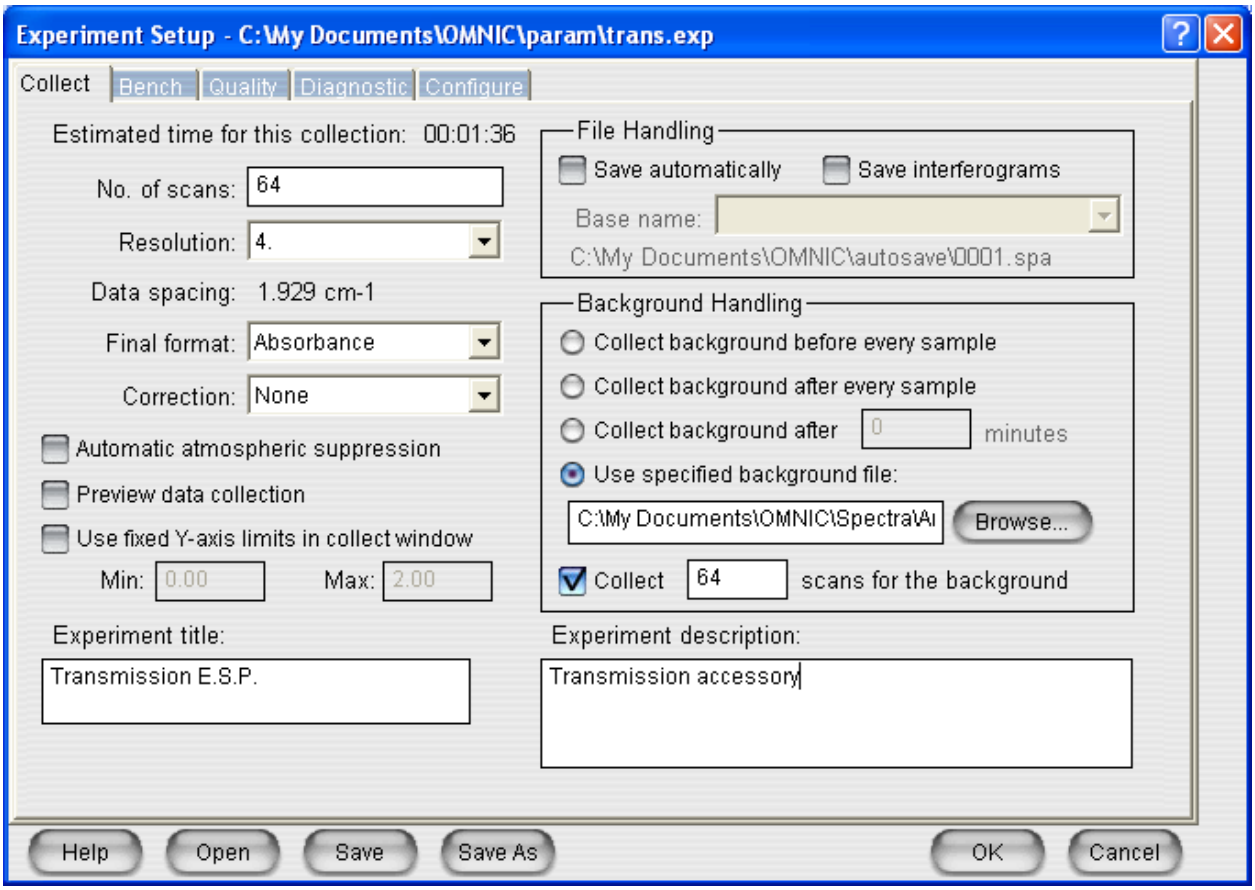
5. Press the "Col Bkg" button 

to collect the background. After the background spectrum is collected, choose yes when prompted to add to window.



6. Choose File → Save As to save your background spectrum as a .SPA file in your folder

7. Choose Collect → Experiment Setup from the top toolbar again. Adjust data acquisition parameters as desired, and be sure to choose "Use specified background file" in the Background Handling section. Choose the background file you just saved.



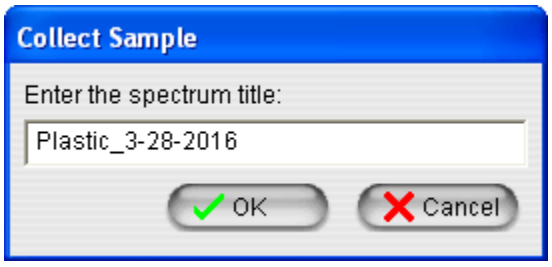
8. Load sample into transmission holder

9. Close and lock the sample compartment door. Allow sample compartment to purge with nitrogen for 1 minute before beginning sample measurement.

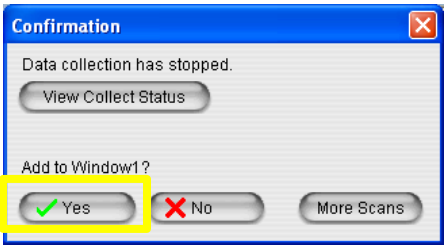
10. Press the “Col Smp” button 

to measure the sample spectrum

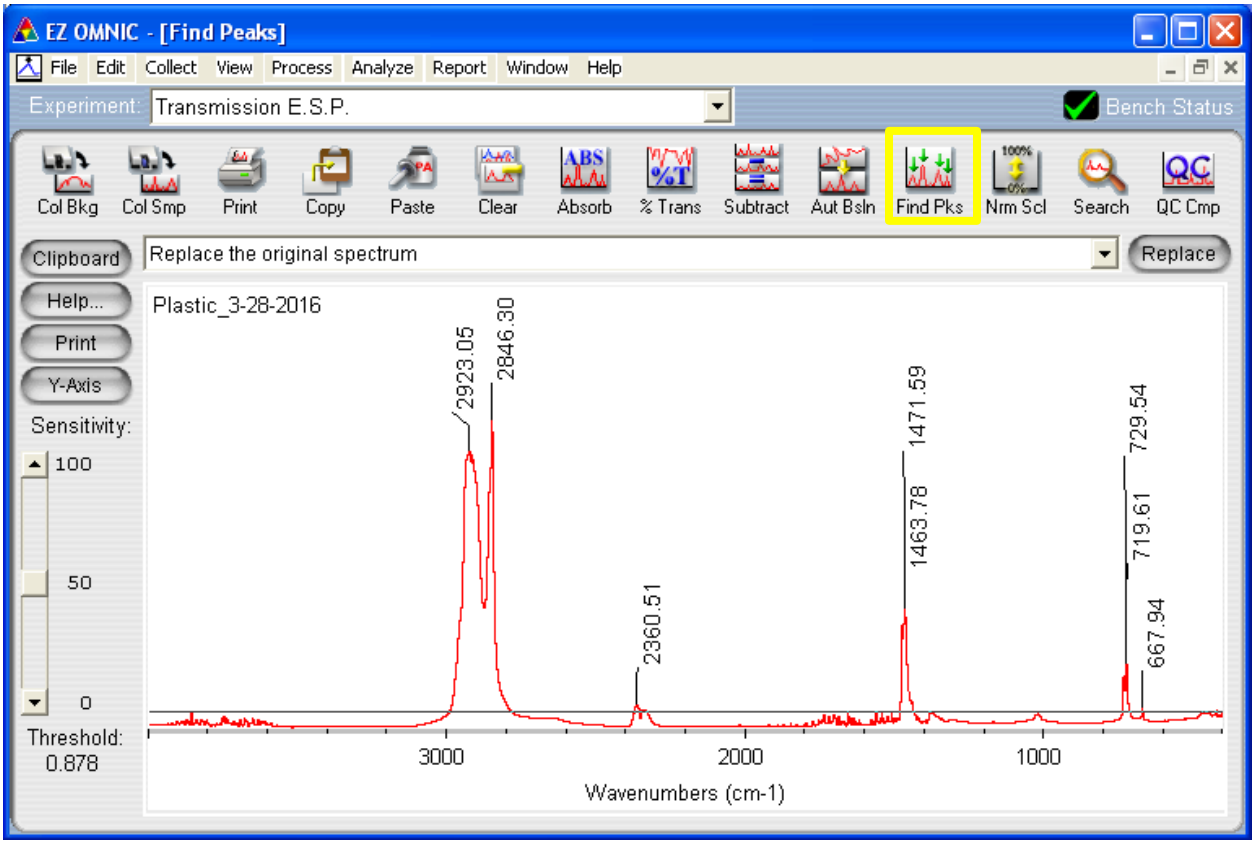
11. Give your spectrum a name in the “Collect Sample” popup window



12. Press “OK” after data collection when prompted to add spectrum to the spectral window



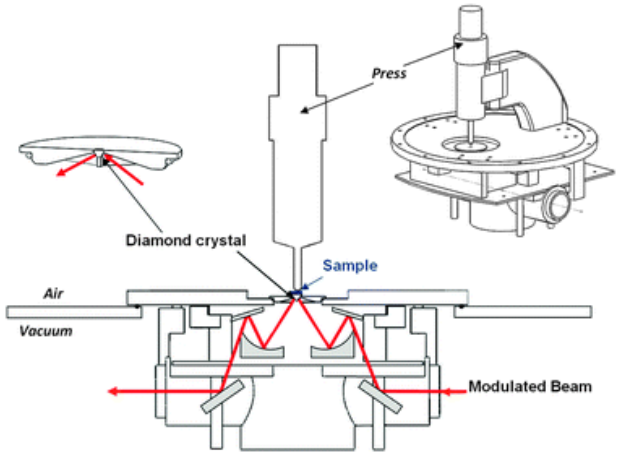
13. Label peaks if needed using the “Find Pks” button



14. Choose File → Save As to save your spectrum as both a .SPA and a .CSV (.CSV will open in Excel)

15. You can create a report by choosing Report → Preview/Print Report. Reports can be printed to file and saved as a .TIF.

ATR spectra using the Smart ATR stage



1. Remove sample chamber door using the thumb screw located at the top inside of door

2. Use a screwdriver to carefully remove the transmission sample holder from the floor of the sample compartment.

3. Position Smart ATR stage so that it fits into place. ***When it is installed properly, the OMNIC software automatically recognizes its presence and updates the experiment mode from "Default – Transmission" to "ATR."***

4. Gently clean the ATR crystal and anvil head using either ethyl alcohol or isopropyl alcohol and a Kimwipe. Allow it to dry completely before acquiring the background.

5. Acquire the background spectrum as in transmission mode with nothing on the ATR crystal

6. Place sample onto the ATR stage (analysis area facing downwards on top of ATR crystal). Clamp anvil down over the top of your sample to ensure close contact with the crystal.

7. Collect, save, and analyze your spectrum the same way as in transmission mode