

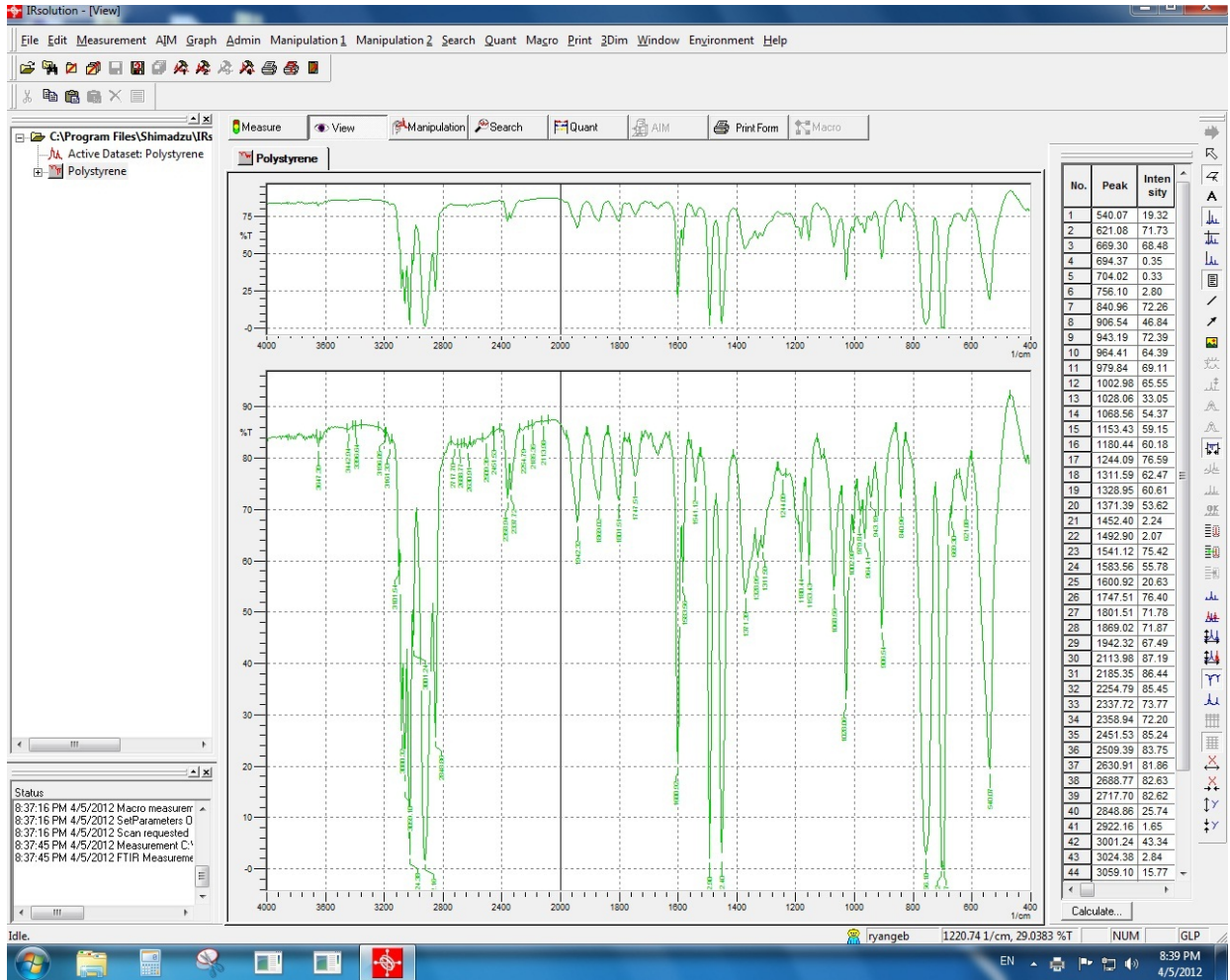
## Shimadzu FTIR Standard Operating Procedure

1. Login to the computer using your NetID and password.
2. Turn on the FTIR machine (the power button is in the front)
3. Start IRSolution software. Start -> All Programs -> IRSolution
4. A window may pop up asking to remove marked data. Click yes.
5. Another window may pop up saying "Autoadjust required. Perform autoadjust now?" Click yes.
  - a. This may take several minutes
6. On the top toolbar, click on Measurement -> EasyScan
  - a. A window will pop up with some options. Typically nothing needs to be adjusted, but you can select the range of wavenumbers scanned (in  $\text{cm}^{-1}$ ).
  - b. Name the data file and add any comments. Then click ok.
7. It will ask to execute BKG (background) measurement. Click yes.
8. It will ask to execute BKG measurement again. Click no.
9. Now it is time to place the sample in front of the beam. There is a triangular sample holder that can be used. Tape can also be used to hold the sample in front of the beam. (The beam is red; make sure it is going through the part you want to test).
10. Once the sample is in place, close the chamber and click ok.
  - a. The spectrum will be acquired
11. It will ask "Are you all right?" Click ok.
12. Save the XPS file if desired. It contains the spectrum and lists peaks in a table.
13. Now, you can export the data to a text file for use in Excel or other software if desired.

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a. File -> Export. Save as (ASCII) which will make a .txt file.

14. See the figure below to see what the screen should look like.



15. A peak or spectrum search can now be performed by clicking on search.

a. It is recommended to try both as one may find a better match than the other.

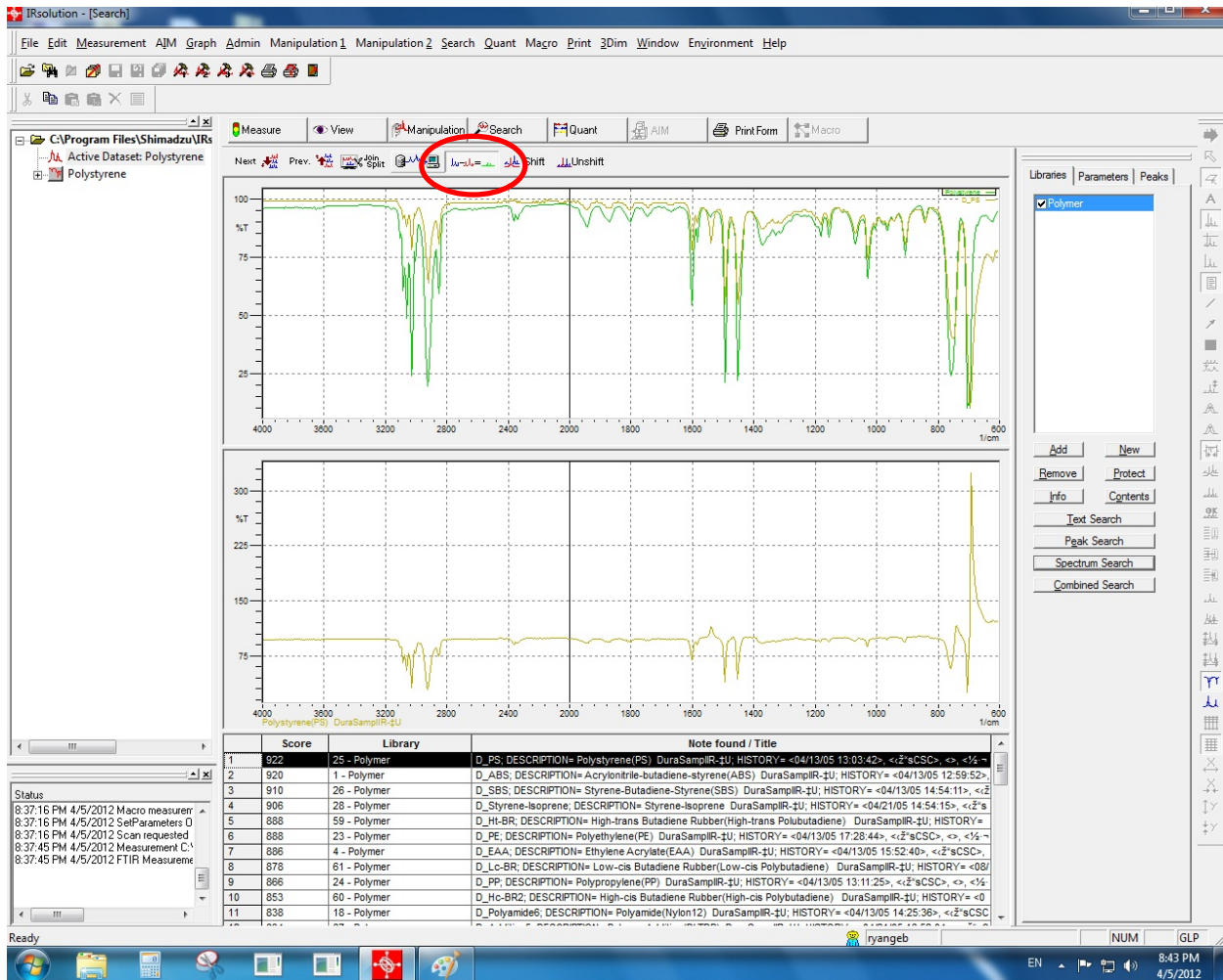
16. The Y-Axis can be changed to absorbance or % transmission by clicking Graph -

> Y-axis mode -> Tra or Abs

17. The blue - red = green button (circled in the image below) will put both the acquired spectrum and the matched spectrum on the same graph.

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18. The matched spectra will be given a score out of 1000 on how well it matches the acquired spectra (922 for this test).



19. When finished

- Close the software
- Remove the sample
- Turn off the power
- Log off