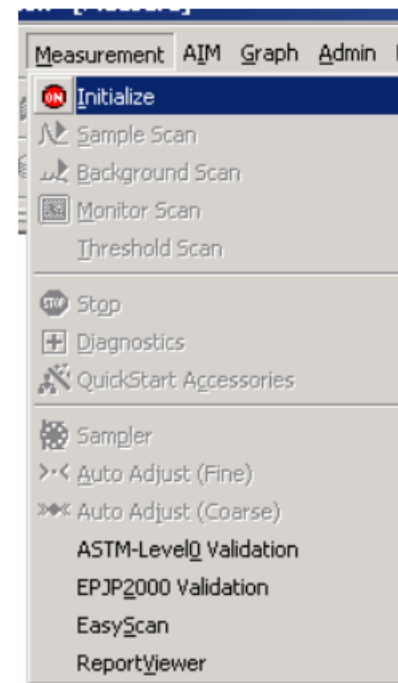


Shimadzu IR Affinity-1 FTIR

Rob Sommerhalter
Updated July 13, 2022

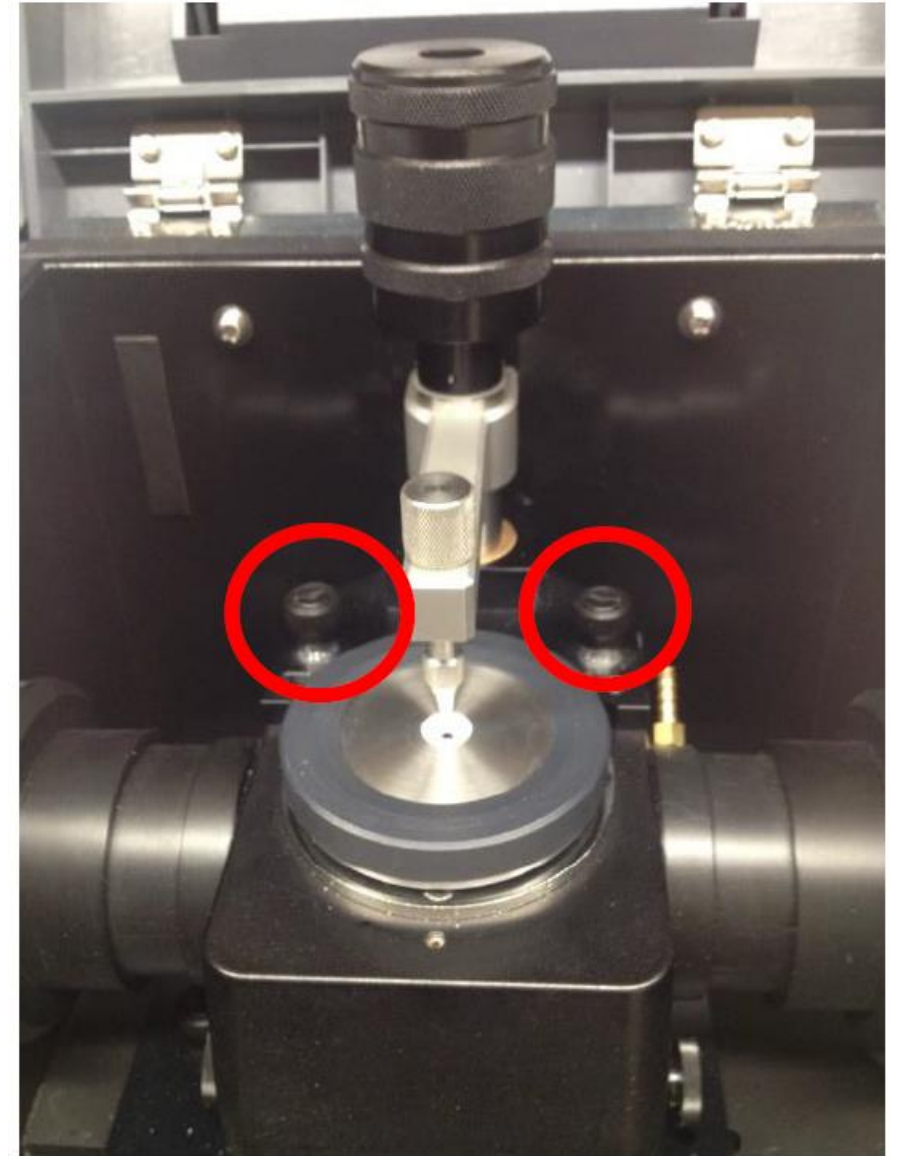
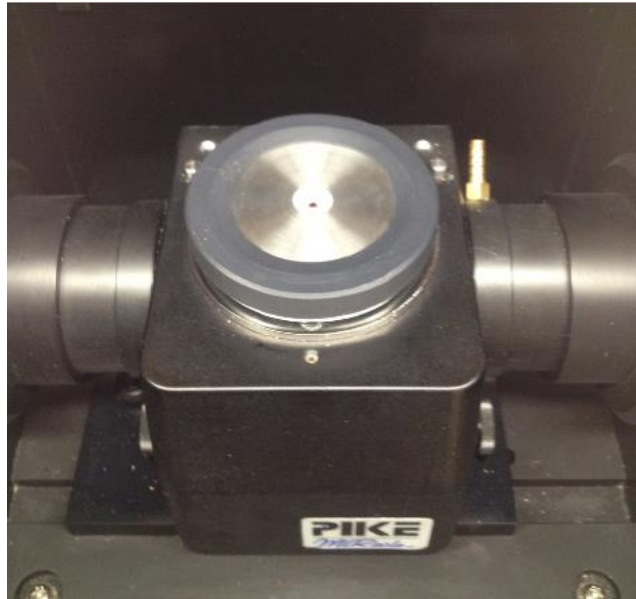
Getting started



- Turn on the instrument using the switch on the bottom right.
- Log into the computer and boot up IRSolution software.
- Initialize the connection between instrument and computer.

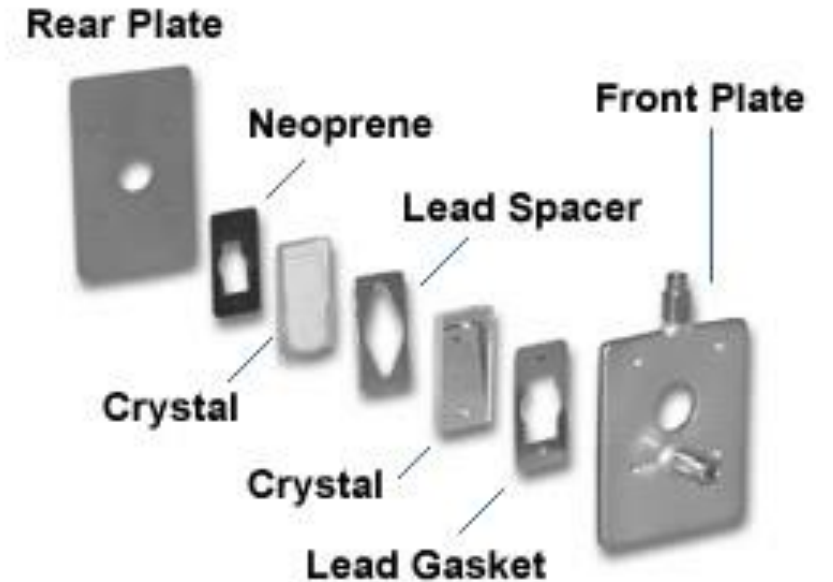
Accessories

- Zn/Se or diamond Zn/Se ATR crystal
- Pressure clamp
- Other accessories for consideration:
NaCl, KBr, CsF, Zn/Se liquid cells.



Accessories – Liquid cells

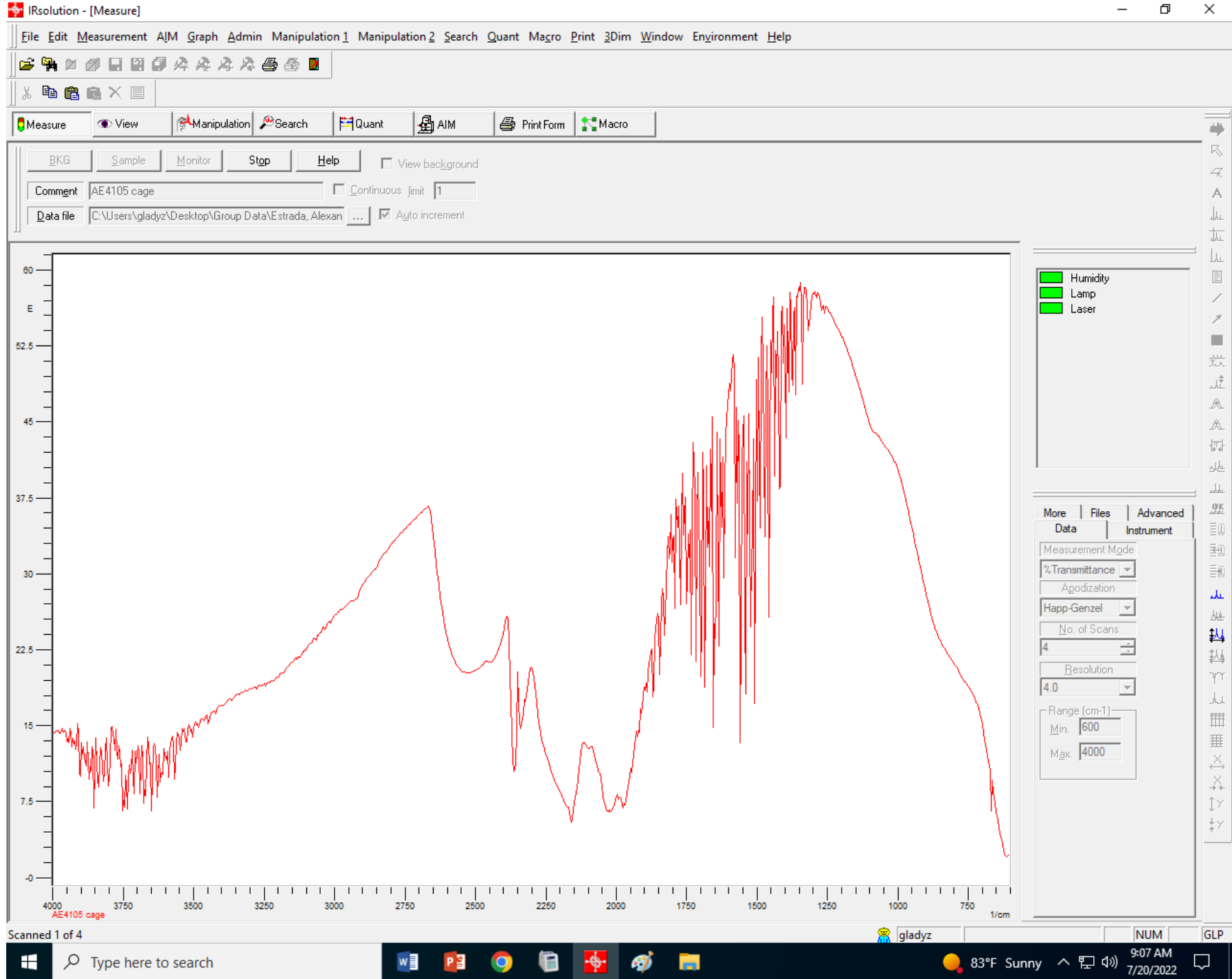
- Usually made of NaCl, KBr, CsF, ZnSe
- Fixed path length
- May be sealed for O₂ or H₂O sensitive material.
- Water sensitive crystals are much more affordable (~\$200), but become cloudy rapidly.
- We do not presently own a liquid cell or the sampling accessory.

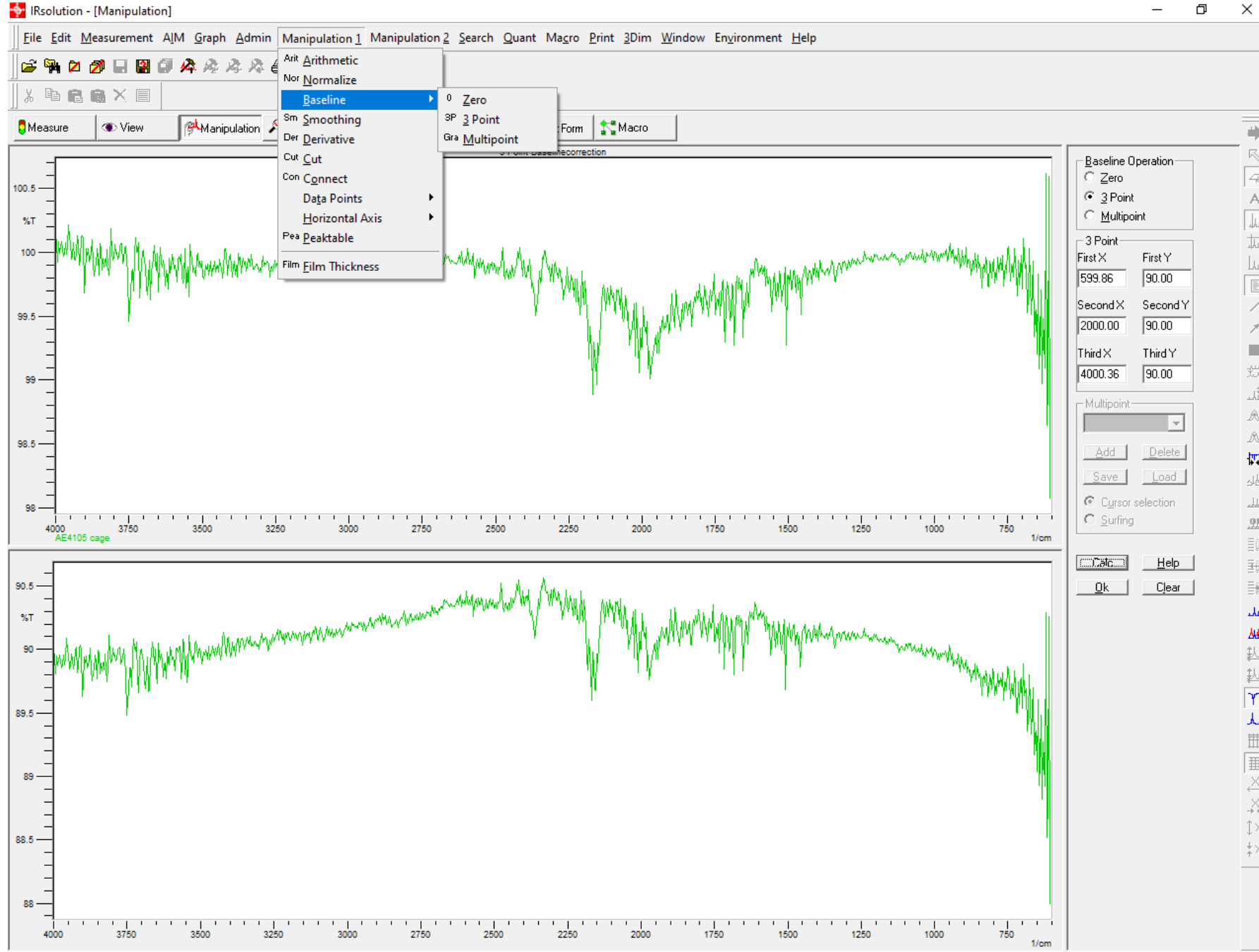


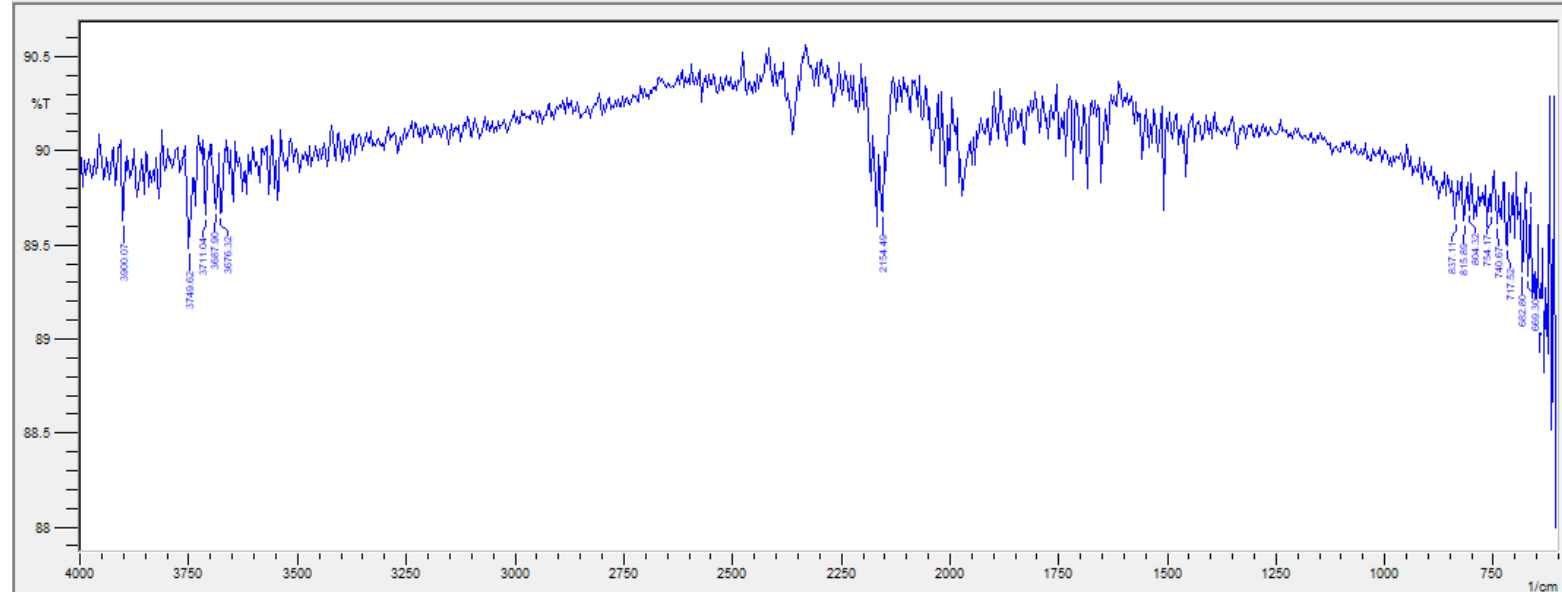
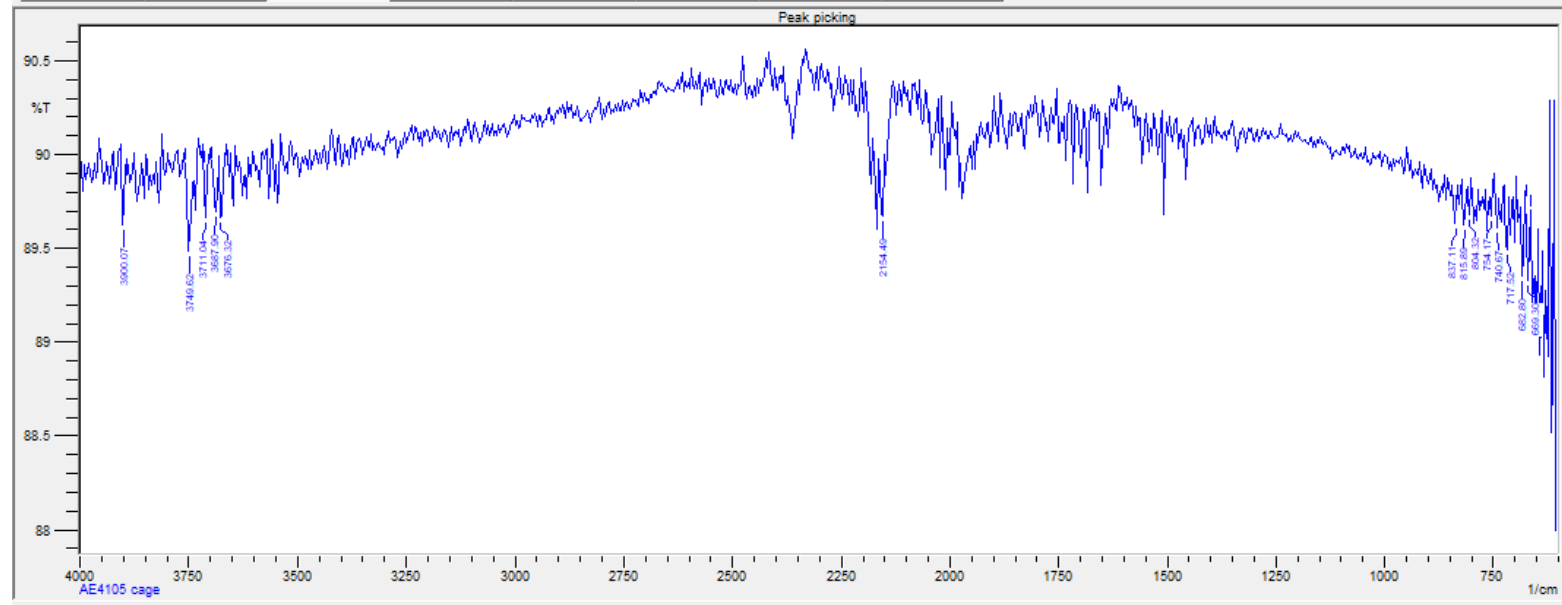
Dos and Don'ts

- **Do not adjust the two knobs at the base of the ATR accessory**
- **Use cotton balls with isopropyl alcohol to clean the crystal. Do not use acetone.**
- Unscrew all parts on the ATR (high pressure clamp, mounting ring, and the liquids retainer) before cleaning
- Gently remove all of the sample. Do NOT try to recollect your sample by scraping it off the crystal surface.
- Save your spectrum in the IR software format for future manipulation/reference.
- Export your spectrum as .txt if you plan to manipulate data in another program (e.g. Excel).
- Optionally, you can “Print Screen” and paste the copied screenshot into Paint. Then save the picture as an image file. This should not replace other data storage practices.
- Backup your data to a flash drive to transfer it to your personal computer. The FTIR terminal is not connected to the network.
- With the ATR accessory, purge the box with N₂ if desired. A continuous flow of N₂ is better than nothing.
- If there are any issues with the instrument or you need guidance, see the persons in charge.









Parameter

Noise: 0.1000

Threshold: 89.6995

Min Area: 0.0300

Common Baseline

Add Point

Delete Point

Manual Peak Pick

Consider Manual

603.719408

Add Peak

Delete Peak

3 Point

Divide

Range

Use Range

Show Ranges

Calc Help

Ok Clear



Finishing Up

- Save spectrum in desired formats. Exit the software and log out.
- Sign the log book.
- Clean the crystal and sampling accessory with isopropyl alcohol and cotton ball.
- Turn off the instrument if done using for the day.