

Sample Preparation for the Perkin-Elmer IR Spectrometers

Preparing Your Sample

1. The small round NaCl crystal plates must always be kept wrapped in a clean Kimwipe within their metal containers and stored in a dessicator when not in actual use, because they are hygroscopic and will pick up moisture from the air. Ideally, they should not be handled with your bare hands, because perspiration and oils from your skin will severely damage their highly polished surfaces.
2. Preferably while wearing protective gloves, remove the metal containers holding the NaCl crystal plates from the dessicator, take out two crystals, and carefully place them side by side on a clean paper towel. (***They are very fragile and will easily break if dropped***).
3. Using a clean disposable Pasteur-type pipette, place 2-3 drops of your liquid sample on the surface of one of the crystal plates, then slowly slide (to minimize any possible air bubble formation) the second plate over the sample-containing surface of the first, thereby "sandwiching" your sample between the two plates. Using a fresh Kimwipe, gently wipe the edges to remove any excess sample that may have leaked out.
4. Open the sample compartment of the spectrometer, and carefully place the crystals containing your sample on the sample holder, then close the sample compartment door and proceed to take a spectrum by following the specific instructions provided for the instrument (*If you are not sure about what you are doing, please ask an instructor for help*).

Cleaning the NaCl Crystal Plates When Finished

1. After taking a spectrum of your sample, remove (while still wearing protective gloves) the crystal plates from the instrument, carefully separate them, and place them on a clean paper towel. Using a clean Pasteur pipette, thoroughly flush all the surfaces of each crystal with chloroform (***ideally this should be done in a hood to avoid inhaling chloroform vapors***), wrap each crystal in a fresh Kimwipe, place it back in its metal container, and return the containers to their storage dessicator.
2. Dispose of all used pipettes, paper products, etc. in proper waste containers, and

check to be certain that you have left the work area clean and neat for the next person.