Pellet Pressing Protocol

1. If the pellet press is not clean, clean it before using it (or risk damaging both it and your pellet)
2. Remove a packet of KBr from dessicator. Use an opened one if available.
3. Weigh out 60mg of KBr on weigh paper. Grind KBr for 30-60 sec in small agate mortar and pestle, destroying all large grains.
4. Dump KBr back onto weigh paper
5. Add a tiny amount of your sample to mortar (0.5 to 1 mg, as excessive amounts of sample will prevent light from making it through your pellet) and grind for 15 sec.
6. Add your ground KBr back to the mortar
7. Stir 15-30 sec with spatula to finely disperse the sample. Grind a little more if the mixture looks inhomogenous.
8. Place the lower screw in your clean die assembly, making sure that the side vent hole is covered. Leave enough room for the screw to be turned a couple more turns.
9. Transfer your powder to a piece of weigh paper folded down its diagonal, and pour the powder into the die assembly.
10. Gently tap the die to level out the powder.
11. Insert upper screw and hand tighten.
12. Using two counter-rotating wrenches, tighten screws to their limit of motion. Push hard on them for a couple of seconds once they reach their limit.
13. Wait 30 sec. Return the unused KBr the dessicator during this time.
14. Crank the wrenches hard for a couple more seconds, then undo the screws. Note that if you accidentally tighten one screw after the other has been removed, you will destroy your fragile pellet.
15. Your pellet should now look translucent when held up to the light, and should only have minimal inhomogeneities. Take this pellet to the IR spectrometer, and collect a data set with a TA's help.
16. Once a good data set has been collected, pass the pellet press to the next person in line, who will clean out the die while your TA helps you with your data analysis.
17. The die should be cleaned by using a spatula or wooden rod to punch out the salt pellet into the solid waste jar. The die should be rinsed out with a jet of water from a sink, and squirted with acetone to facilitate rapid drying. Twist up a Kimwipe and run it through the bore to remove any remaining substances.