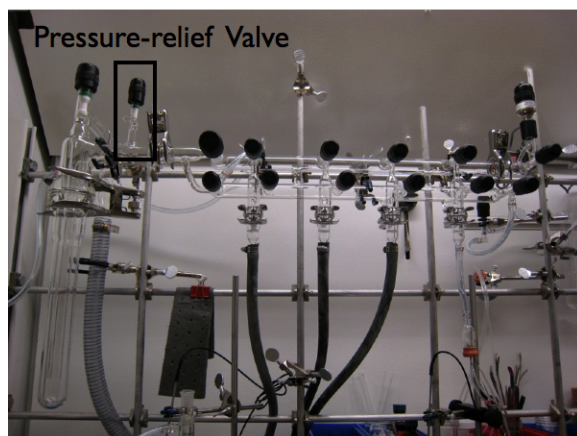


Setting Up the Vacuum Line

1. Check to make sure the **pressure-relief valve** is open.



2. Turn on vacuum pump using the **red/white switch** below the hood.



3. Close the **pressure-relief valve**.

4. Plug in the **vacuum pressure gauge** and wait for it to settle. The pressure should read < 0.100 with a decent vacuum. If it does not, check for leaks and adjust the vacuum line until it reads below 0.1 mm Hg.



(Note: This gauge should NEVER be on when the system is not under vacuum! Also, do not leave the gauge on overnight as this leads to unnecessary wear on the filament.)

5. Put up the **dewar** and add liquid N_2 .

(Note that the pressure gauge should go even lower when N_2 is added to the dewar.)



Your vacuum line is now ready to use!

(Note: For overnight runs, use the large dewar instead these smaller ones. The small dewars need to be re-filled every 6-8 hrs.)

Shutting Down the Vacuum Line

1. Unplug the **vacuum pressure gauge**.
2. Open the **pressure-relief valve** all the way and then immediately shut off the vacuum pump.
3. Lower the **dewar** and allow the trap to warm up (with the **pressure-relief valve** open). Empty out any collected solvent and clean out before next use.

[WARNING! If your line is not properly set up, the oxygen (from air) will condense in your trap giving a blue liquid/haze. If you notice a blue color when you are removing the dewar (see above) -- you should immediately close your hood sash and leave the area. Do not touch the vacuum trap as liquid O₂ can be shock-sensitive! Also, never leave the trap up with the vacuum pump off or you will condense O₂.]

Pump Maintenance

You should change your pump oil at least every 4 months with normal use. *However, if you accidentally pull a significant amount of solvent into the pump - change the pump oil ASAP!* Vacuum pumps are expensive so please take care of them!