Use caution when sliding the thermometer into the rubber adapter. Use a twisting motion and add a drop of silicon oil if it sticks. Do not force the thermometer - it can break!

thermometer bulb is below level of side arm
fractionating column (wide-bore, filled with packing material)
distillation flask is securely clamped to a ring stand
heating mantle is elevated and NOT plugged in directly to wall outlet

blue Keck clip
water out
water in
blue Keck clip
remains open to atmosphere (never heat a sealed system!)
blue Keck clip
select an appropriately sized receiving flask and cool in an ice-water bath

heating mantle (fabric or sand-filled ceramic well)
plug fabric heating mantle into cord and then twist to lock it in place

Variac or rheostat (voltage regulator)

* lightly grease ground-glass joints to prevent them from getting stuck together and to prevent vapors from escaping (careful with grease at receiving flask, as you don’t want to contaminate your distillate)

Before you begin heating, check the following:
1) appropriately sized round-bottom flask used? (1/2 – 2/3 full, NOT pear-shaped)
2) placement of thermometer (see diagram, below arm leading to condenser)
3) cooling water running? from bottom to top? Flow should be just strong enough to keep condenser filled.
4) all reaction/distillation materials plus 1-2 boiling chip(s) in place? (double check reagent table)
5) all apparatus is clamped and secure?
6) ALL ground glass joints lightly greased?
7) any loose ground glass joints?
8) heating mantle plugged into the Variac ONLY? Not into an outlet: FIRE!!
9) notebook/data table ready to record observations IN INK?
10) if all of the above have been verified, then have the instructor look it over before heating.