1. Assemble the gel tray and put the combs
2. Prepare 50 ml of 1% agarose in TAE buffer. (why)
3. Add Ethidium bromide
4. Put the flask in the microwave oven and run until you see the bubbles.
5. Be careful not to touch the flask with your hands
6. Remove the flask from the microwave oven and wait until the temperature decreases slightly (don`t allow to solidify again).
7. Load the gel into the plate until the half of the comb and wait until the gel is solidified.
8. Gently remove the combs
9. Take the gel with the trey and put them in the running container
10. Add the running buffer (1X TAE buffer) so that the gel will be immersed completely
11. Add 5 µl DNA ladder into the 1st well
12. Mix 5 µl DNA sample with 2 µl loading dye and add them into the 2nd well
* Loading dye consists of :
* Glycerol
* Tracking Dye (Orange Dye)
1. Put the cover of the container (Insure that you have put it in the right way)
2. Run at 90 volts and wait until the dye passes at least the half of the gel.
3. Put the cover of the container (Insure that you have put it in the right way)
4. Run at 90 volts and wait until the dye passes at least the half of the gel.
5. Stop the run
6. Take out the gel and remove the attached plate.
7. Put the gel in the UV illuminator
8. Read your results.

**2.2-Measure the concentration and purity of DNA Using nanodrop**

1. Using nanodrop, the concentration and purity of DNA (260/280), and (230/260) will be measured.
2. First, add 2 µl of DNase and RNase free water as a blank
3. To conferm, repeat step 1
4. Add 2 µl of your sample
5. Record the results