Purpose: To separate DNA based on size (base pairs)

Preparing, Loading, and Running a 1% Agarose Gel

Preparing

1. Add 1 g of Agarose in 100 mL of 1X TBE in an Erlenmeyer flask
2. Heat in the microwave until fully dissolved (usually about 45 seconds to 1 minute)
    a. Solution should be completely clear
3. Allow the solution to cool until comfortable to touch
4. Add 10 µL GelRed Nucleic Acid Gel Stain and mix
5. Insert casting tray, make sure the rubber on the sides is not overlapping
6. Carefully pour the agarose into the tray and place the comb to create the wells
7. Allow the gel to solidify
8. Once solidified, change the orientation of casting tray where the rubber sides are not in contact with the sides of the system.
9. Pour in 1X TBE into the gel electrophoresis system to the fill line, be sure to submerge the gel, and remove the comb

Loading

1. Load ~5 µL of the ladder in the first well
2. Prepare your samples to load by adding in 1 µL of 6X Loading dye for every 5 µL of DNA and load

Running

1. Once the gel has been loaded, slide on the cover making sure the negative electrode is closest to the DNA and the positive electrode is at the bottom of the gel
2. Run for about 45 minutes to an hour