

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

*IF you are running gel for gel extraction, load 50 μ L and run a large gel in a big tray

Preparing, Loading, and Running a 1% Agarose Gel

Things to Thaw:

1. MW ladder (not on ice) ... found in freezer
2. Loading Dye (not on ice) ... found above scale

Preparing

1. Added 1 g of Agarose in 100 mL of 1X TBE in an Erlenmeyer flask
2. Heated in the microwave until fully dissolved (usually about 45 seconds to 1 minute)
 - a. Solution should be completely clear
 - b. Do in 30 second intervals
3. Allowed the solution to cool until comfortable to touch
4. Added 10 μ L GelRed Nucleic Acid Gel Stain and mixed
5. Inserted casting tray, made sure the rubber on the sides is not overlapping
6. Carefully poured the agarose into the tray and placed the comb to create the wells
7. Allowed the gel to solidify
8. Once solidified, changed the orientation of casting tray where the rubber sides are not in contact with the sides of the system.
9. Poured in 1X TBE into the gel electrophoresis system to the fill line, being sure to submerge the gel, and removed the comb

Loading

1. Loaded ~5 μ L of the ladder in the first well
2. Prepared your samples to load by adding in 1 μ L of 5X Loading dye for every 5 μ L of DNA and loaded

Running

1. Once the gel had been loaded, slid 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. Ran for about 45 minutes to an hour
 - a. Note: Longer with lower voltage gets you a better gel