Non-denaturing polyacrylamide gel electrophoresis (PAGE gel)

1. Place Glass plates in casting apparatus

2. Add together the following to make 5ml of gel (0.75mm spacers) : 12% (for 40-200 bp dsDNA)
   - 500µl 10X TBE solution
   - 35µl Ammonium Persulfate (10%w/v)
   - 2 mL 29:1 acrylamide solution (See the table under "notes" to determine the desired acrylamide concentration)
   - 2.463 mL water (To make 5 mL)
   - 2µl TEMED

3. Pipet the acrylamide solution between the casting plates using a 5ml pipettor.

4. Insert comb into the top of the gel and allow it to cure vertically for approximately 30 minutes.

5. Combine the following for all DNA samples :
   - 5 L DNA solution
   - 1 L 6X DNA loading dye

6. Insert the gel into the electrophoresis chamber along with the buffer dam.
   - Make sure both the gel and the buffer dam seal.
   - The wells on the gel should face the inside.

7. Add 1X TBE to the space between the gel and the buffer dam until the TBE fills the wells in the gel.
   - No TBE should leak into the space outside of this chamber.

8. Add 1X TBE to the outer chamber to the specified fill level.

9. Add DNA mix and 100 bp DNA ladder to wells.

10. Apply 60 volts and run for approximately 90 minutes.

![Vertical Electrophoresis Chamber Cross-Section](image-url)