

Agarose-Gel electrophoresis

Aim of the Experiment

This method is used as a quality control of enzymatic reactions on DNA or RNA. It is also useful for the separation of DNA or RNA fragments of different lengths.

Materials

- DNA of Interest
- Gel Ladder (e.g. 2log ladder)
- 6x purple loading dye
- Agarose
- 1x TAE buffer
- Gel chamber
- Sybr Safe DNA stain
- UV illuminator + camera

Procedure

1. Prepare an agarose gel with an appropriate concentration for the fragment (0.5%-3% (w/v)) in TAE buffer.
2. Heat solution until it is fully dissolved.
3. Add DNA stain.
4. Cast the gel in a gel chamber, add an appropriate comb and wait at least 20 minutes until the gel is fully polymerized.
5. Mix at least 100ng DNA with loading dye.
6. Load the gel with your sample.
7. Let it run at 120V, 400mA for 20 minutes.
8. Image the gel under a Camera with UV illuminator.