

## **Protocol: Agarose Gel Electrophoresis using Bio-Rad mini sub cell**

### Preparation of a 1% agarose gel

1. Rinse and dry the gel casting tray with water (can use 95% ethanol).
2. Set up gel tray with comb and end pieces.
3. Dissolve agarose (not LMT, use standard grade) in 1 x TAE in microwave (weigh before microwaving and make up to original weight after microwaving with deionized water). Usual concentration range for agarose is 0.8-1.5% depending on size of DNA being separated.
4. Cool under tap to about 70°C. Add ethidium bromide to 0.5 ug/ml (from 10 mg/ml stock solution) **MUTAGEN WEAR GLOVES!!**
5. Pour gel (thickness about 5mm but will depend on volume of sample being loaded).
6. When gel has set assemble in gel box, cover with 1X TAE and remove comb and end pieces. Connect powerpack and check get runs ok (current at 100 v should be 50-100 mA). Switch off power pack!
7. Add loading dye to samples and load. Run gel at about 100 v.

### 50X TAE recipe

1. Add the following to 900ml distilled H<sub>2</sub>O
  - 242g Tris base
  - 57.1ml Glacial Acetic Acid
  - 18.6 g EDTA
2. Adjust volume to 1L with additional distilled H<sub>2</sub>O