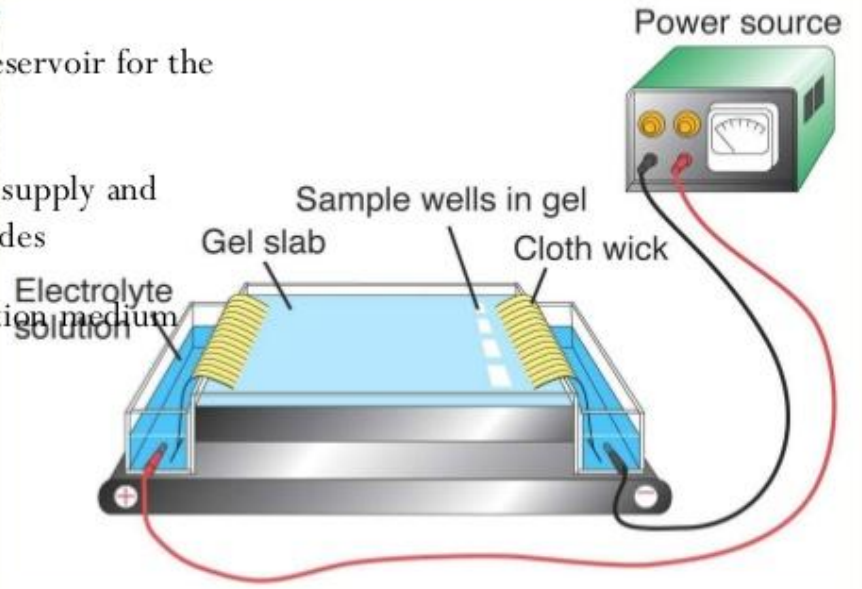
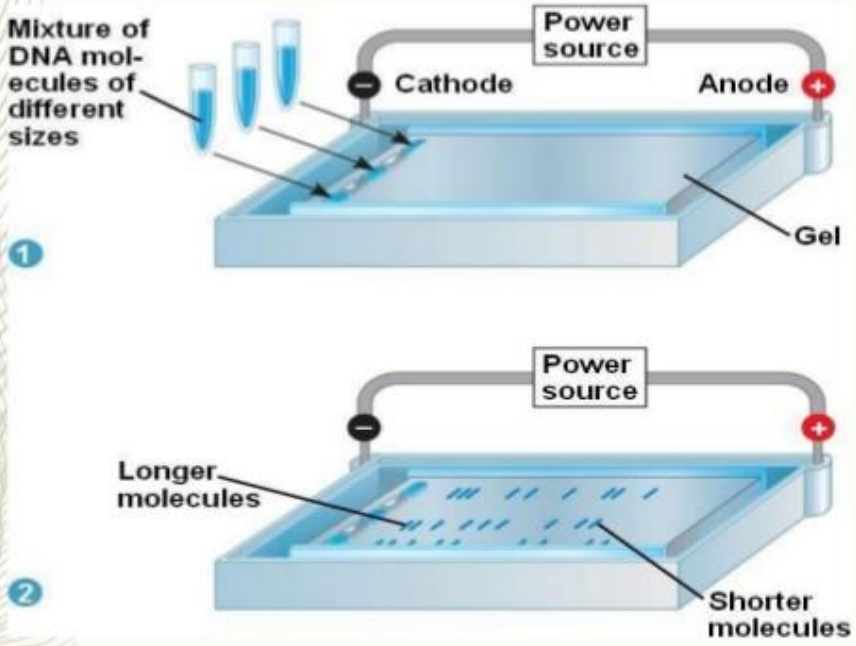
Conventional electrophoresis

- Instrumentation :
  - Two reservoir for the buffer
  - Power supply and Electrodes
  - Separation medium





At any given PH, exist in a solution as electrically charged species either as a cation (+) or anion(-).

Under the influence of an electric field these charged particles will migrate either to cathode or anode, depending on the nature of their **net** charged.

The equipment required for electrophoresis consist basically of two items,

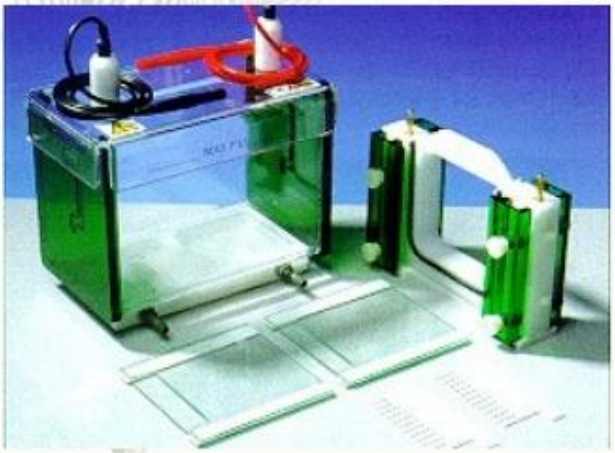
_power pack

Supplies a direct current between electrode in the electrophoresis unit.

_electrophoresis unit

Available for running either vertical or horizontal

Gel system.



Buffer

- The buffer in electrophoresis has two purpose:
  - Carry applied electrical current
  - They set ~~the pH as which electrophoresis is carried out.~~
- Thus they determine;
  - Type of charge on solute.
  - Extent of ionization of solute
  - Electrode towards which the solute will migrate.
- The buffer ionic strength will determine the thickness of the ionic cloud.

Supporting medium

- Supporting medium is an matrix in which the protein separation takes place.
- Various type has been used for the separation either on slab or capillary form.
- Separation is based on to the charge to mass ratio of protein depending on the pore size of the medium, possibly the molecular size.