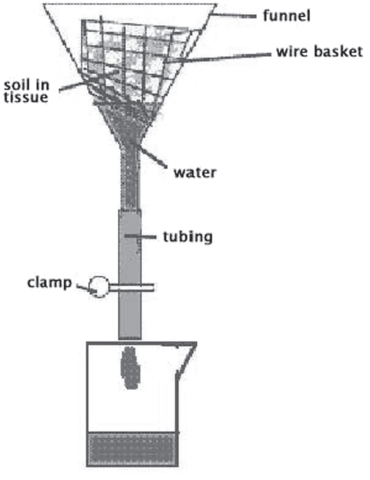
Baermann funnel technique

The basic Baermann funnel technique, which has many modifications, utilizes a glass funnel with a wire mesh basket nested on top. A piece of rubber tubing is slipped over the stem and sealed with a clamp. The funnel is filled with water to a level that will cover soil or plant tissue to be placed in the basket at the top of the funnel. A piece of tissue paper is used to line the basket and minimize the amount of soil that passes through. Nematodes leave the soil or plant tissue, pass through the tissue-paper liner, and accumulate at the constriction of the tube created by the clamp. After a period of time, the clamp is loosened slightly to allow a few milliliters of solution to pass into a container, leaving a fairly clean solution for viewing under a microscope. Laboratories have developed variations for every component of this technique.

Materials

- Paper toweling
- Fine mesh screen (metal)
- Small wire basket (or plastic food basket)
- Funnel
- Tubing (that fits the base at the bottom of the funnel)
- Clamp
- Microscope, slides, cover slips and petroleum jelly (for observing specimens)



Baermann Funnel

Procedure

- Separate the soil in each sample by passing it through the fine mesh screen
- Once the larger chunks have been broken down, spread the sample on a paper tissue. The soil should form a layer about 1 cm thick
- Wrap up the soil within this tissue and place it within the wire basket or plastic fruit basket
- Slip a hose with a clamp onto the neck of a large funnel. Position the basket and soil in the funnel—see figure below

1. Make sure that the clamp is set on the hose. Fill the funnel with enough water so that the bottom of the soil is positioned beneath the surface of the water
2. Leave undisturbed for 2–3 days
3. You may have to refill the funnel to replace water lost to evaporation
4. During this time, active nematodes will move out of the soil and into the water. They will fall to the bottom of the funnel and collect in the tube. To retrieve them, release the clamp, allowing water to flow through the hose into a collection beaker