Green House Soil Recipe

Directions

Preparation of the Green house soil:

Prior to its use in soil-water media, treat soil in batches by placing it in a heat-resistant pan lined with aluminum foil, fill the soil to a so depth of ¼ inch, and bake at 150°C for 2 hours. After it cools, cover the pan with aluminum foil and store in darkness at room temperature. Avoid excessive moisture during storage.

Adaptation of E.G. Pringsheim's biphasic soil-water medium. Variations of this medium are suitable for xenic cultures, especially for isolation purposes and for growing algae to secure "normal" growth forms. Soilwater is not a well-defined medium, yet not all soil is suitable for culturing a broad range of algae. UTEX utilizes soil that was obtained in the early 1970s as greenhouse soil from Indiana University. For a long shelf life it must be kept dry and away from light. UTEX keeps it in sealed 5-gallon plastic containers. There is almost certainly nothing special about the particular soil used by UTEX. However, several considerations are probably important, including the following:

- 1. The soil should be a loam, with a mixture of particle sizes (sand, silt, clay).
- 2. It should contain a moderate amount (15 20%) of very-well-decomposed organic matter.
- 3. It must not contain pesticides, especially herbicides.
- 4. It should be soil that has been aged (preferably for 6 months or more) under moist conditions and not, for example, fresh potting soil, soil that contains fresh manure, or soil to which a commercial fertilizer was recently applied.

5. A slightly acidic soil derived from granite or other igneous rock is preferable to soil obtained from calcareous soils. Calcium carbonate can be added to the soilwater medium when it is prepared if a slightly alkaline medium is required.

6. Particulate matter in the soil such as gravel, Perlite, or vermiculite are not necessarily damaging but can be of considerable nuisance when wishing to quantitate the amount of soil used in the medium or when handling algae that are physically associated with the soil. Particulate organic matter, such as compost that is only partially degraded, should be avoided altogether.