

EQUIPMENT, MATERIALS AND GLASSWARES

- 1. Autoclave** of sufficient size and number. Used for sterilization of media and for discarded plates / used media, etc (with calibrated thermometer and pressure gauge).
- 2. Anaerobic jars or incubators** with equipment and material for obtaining anaerobic conditions.
- 3. Balance sensitive** to 0.1 g with 200 g load.
- 4. Blenders** with steel jar and lid / **Stomacher** :A blender-like device in which food samples in buffer are homogenized by gentle pummeling rather than high-speed blending.
- 5. Bunsen burners** is used for heating, sterilization, and combustion .
- 6. Colony Counter** :Device equipped with a lamp, designed to shine light through a petri plate on which microbial colonies are growing. It allows for low-level magnification of colonies for ease of counting. (Quebec or equivalent).
7. Dilution and media storage bottles. 120, 300, 600 and 1500 ml in capacity.
8. Durham's tubes
9. Glass test tubes 16 x150 mm. Rimless
10. Plastic caps for test tubes
11. Serological test tubes
- 12. Hot air ovens** used for sterilization of glass and metal ware.

They should have a thermostat range between 150-185 C °.

13.Hockey sticks: Glass bent rods (or suitable plastic make) with fine polished edges, 3-4 mm diameter, 15-20 cms long with angled spreading surface 45-55 mm long or disposable plastic material.

14.Howard Mold Counting Chamber .

15.Haemocytometer.

16.Incubators. At least 4 incubators are necessary, to be adjusted at 30 C°, 37 C, 44.5 C and 55 C of proper size. B.O.D. incubator for temp. Less than ambient temperature.

17.Inoculating loops is used to inoculate test samples into culture media , and wires. (3-5 mm dia of nichrome or platinum or plastic).

18.Magnetic stirrer .

19.Membrane Filtration apparatus, for sterilizing fluids which are affected by heat, e.g. Seitz filter operationalized membrane filters.

20.Microscope binocular with 900 x and higher magnification.

21.Microscopic slides and cover slips.

22.Non-adsorbant cotton.

23.Petri plate (glass or plastic)

24.Petri plate containers. (Stainless steel or aluminium, with covers) for hot air sterilization of glass petri plates.

25.Pipettes. (glass or plastic) Graduated, with 1, 5 and 10 ml total flow type / Automatic pipette with error < ± 5 % with sterilisable or Autopipetor with Pre-sterilized plastic tips.

26. Pipette containers (Stainless steel plastic tip containers boxes)

27. pH meter. Electronic pH meter with accuracy of 0.1 pH unit shall be used.

28. Refrigerator and deep freezer.

29. Test tube racks and baskets to hold test tubes.

30. Thermometers.

31. Vortex - mixer.

32. Water bath is used for holding media at 44-46 C.

33. Serological water bath .

34. Laminar flow chamber .

35. Biological safety cabinet level II .