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**Q1. Write the names and function of different equipments used in microbiology lab**

**Ans:** Aim to study the working principle and operation of equipment used in microbiology laboratory a modern microbiology laboratory should be furnished with the following equipment

 **Microscope:**

Different types of microscope are used for visual observation of morphology, motility, staining and fluorescent reaction of bacteria.

**Sonicator:**

It is used to rupture cell using high frequency waves.

**Hot plate:**

Hot plate is used to heat chemical and reagents the hot plate is made of an iron plate which get heated by an electric heating element from below the required degree of heating is obtaining by a regulator.

**Double -Pan analytical balance:**

It is used to weight Chemicals and samples preciously weighing take more time, for which it is used in emergency Only.

**Deep fridge:**

It is used to store Chemicals and preserve samples at very low sub-zero temperatures.

**Electronic top -Pan balance:**

It is used for waiting large quantities of media and other chemicals, ware procedures wedging is not of much importance.

**Electronic analytical balance:**

It is used to wait small quantities of chemical and samples preciously and quickly.

**Drying oven:**

For preparation of certain Regents the glassware, after proper cleaning and ranging with distilled water, are required to be dried they are dried inside the drying oven at 100\*C till the glass wear dry up completely.

**Q2. What are the different chemical and physical methods of sterilization and disinfection?**

**Ans:**

**1) Chemical method of Sterilization and disinfection:**

•Chemical Sterilization is the process of removal of microorganisms by the use of chemical bactericidal agents.

1. **Gaseous Method:**

Gaseous method include

•Ethylene oxide

•Formaldehyde

•Nitrogen oxide

•ozone

1. **Liquid Sterilization:**

•Hydrogen peroxide

•Glutaraldehyde

•Hypochlorite

**2)Physical method of sterilization and disinfection:**

**1)Heat:**

Heat include Dry Heat and Moist Heat

**Dry Heat:**

* Red Heat
* Flaming
* Hot air oven

**Moist Heat:**

* Temperature below 100 degree Centigrade
* Temperature at 100 degrees centigrade
* Temperature above 100 degrees centigrade.

**2)Radiation:**

•Radiation includes Ionizing and Non ionizing

**Ionizing:**

•X-rays

•Gamma rays

**Non ionizing:**

•Infrared

•Ultra Violet

**3)Filtration:**

Filtration include

•Depth filter

•Membrane filter

•Air filter.

 **THE END**