

MICROBIOLOGY

Autoclave -

It is an example of moist heat sterilization. It is more effective than dry heat, it is due to the fact that the steam has more penetration power than dry heat.

This method is used to killing the bacteria spores. The moist heat penetrates the spores where the coagulation of the protein is seen. It is the simple laboratory equipment consisting of the vertical or horizontal cylinders made up of stainless steel. It is containing of the lid and the body. The lid is closed by the screw and made air tight. The lid on the upper tight contains safety valve, pressure gauge and release valve.

Autoclave is heated by electric coils. Water is filled sufficiently in the Autoclave. The material to be sterilized are placed in the inner side of the cylinder. The lid is screwed tightly. The safety valve is adjusted to require pressure. The steam is allowed to escape freely until all the air has been displaced. The discharge is closed. Steam pressure rises inside the container when it reaches the desired level. The safety valve opens and the excess steam escapes from the vent.

Uses - It is used to sterilize fluids, microbial media, glass equipment.

Hot Air Oven

It is most widely and method of sterilization by dry heat , the sterilization period is 160 C for 1 hours . The oven is heated electrically with the heating , elements on the value . The chamber is fitted with fan to ensure even distribution of air . The coil is placed around the chamber to ensure the even distribution of heat . The material should be arranged glass ware are seen . The equipment should be sufficiently cooled before door is opened since the glass vessels may be cracked by sudden pulling.