

**(B) WET HEAT (Autoclaving):**

The method of choice for sterilisation in most labs is autoclaving; using **pressurised steam** to heat the material to be sterilised. This is a very effective method that kills all microbes, spores and viruses. Although for some specific bugs, especially high Temp. or incubation times are required.

**Autoclaving** kills microbes by **hydrolysis** and **coagulation** of cellular proteins, which is efficiently achieved by intense heat in the presence of water.

The intense heat comes from the steam. Pressurised steam has a high latent heat; at  $100^{\circ}\text{C}$  it holds 7 times more heat than water at the same temperature. This heat is liberated on contact with the cooler surface of the material to be sterilised, allowing rapid delivery of heat and good penetration of dense materials.

At these temperatures, water does a great job of hydrolysing proteins... So, does bugs don't stand a chance.