Terminal sterilization is the process of sterilizing a product in its final container. It is an important process as it ensures the product remains sterile.

All medical, ophthalmic and parenteral equipment are sterilized in batches, and usually sterilized using heat. The products themselves however are not thermally sterilized as the heat may damage it. Alternative methods are therefore used, such as filtration which also reduces the risk of a product becoming contaminated.

Before the sterilization process is started, the holding period must be established, which is the time the products must be held at the required temperature or exposed to other sterilization methods to ensure the microbial growth is killed effectively. Any microbial growth that occurs while the products are in storage can affect the quality of the product and must therefore be prevented.

## **Methods of Terminal Sterilization:**

* Ethylene Oxide: for prefilled syringes and medical devices unable to tolerate high temperatures
* Irradiation: also for prefilled syringes and medical devices unable to tolerate high temperatures
* Moist Heat Sterilization: for large and small parenteral devices and ophthalmic products