Bacteriology laboratory tools

There are many laboratory tools that are used in biology laboratories, including the following:

1- **The Microscope**: is used to examine microorganisms that cannot be seen with the naked eye.

2- **Sterilization device:** The sterilization device (Autoclave) is used to kill all microorganisms in the environment, or the tools to be sterilized.

3- **Incubator:** The incubator is used to incubate and preserve bacterial cultures.

4- **Water bath:** The water bath is used in biology laboratories for many purposes, such as thawing solid environments after freezing and sterilizing them. The temperature in this bath is adjusted according to its intended purpose.
5- **Microscopic slides:** microscopic slides are used to place samples on them for examination.
6- **Sterile cotton swab**: This tool is used to take a swab from a place to examine and study the microbes contained in the place after they are cultivated in a suitable environment.
7- **Refrigerator:** The refrigerator is used to preserve chemicals, solutions, and biological samples.
8- **Microbial Colony Counting Device:** The microbial colony counter is used to count those growing colonies in an appropriate environment on Petri dishes in some cases.
9- **PH Meter:** This device is used to read the pH of different environments and solutions.
10- **Filter papers:** Filter papers are the tool used in filtering liquids to obtain liquids free of any impurities.
11- **Loop:** It is a simple tool primarily used by microbiologists to capture and transport a small sample of microorganisms.

12- **Petri dishes:** is a shallow transparent lidded dish that biologists use to hold growth medium in which cells can be cultured,[1][2] originally, cells of bacteria, fungi and small mosses.

13- **Burner:** is a kind of ambient air gas burner used as laboratory equipment; it produces a single open gas flame, and is used for heating, sterilization, and combustion.

14- **laboratory solutions**: sterilizers, stains, detergent, laboratory reagents.

Safety standards in laboratories

There are many things that must be considered in laboratories to achieve safety standards, the most important of which are the following:

- Inform the official of all injuries, accidents, and breakages resulting from glass or existing equipment.
- Tie the hair, and cover it to avoid exposure to flame.
- Choose appropriate clothing and shoes for the laboratory environment, and be careful not to touch loose clothing with fire or chemicals.
- Follow all instructions and directions given by the laboratory supervisor.
- Avoid eating and drinking in the laboratory at all times.
- Avoid sitting on lab tables.
- Do not dispose of solid materials in the sinks. Do not taste or smell any chemical.
- Adhere to the use of laboratory glasses to protect the eyes when heating materials, dissections, or otherwise.
- Avoid unauthorized experiments.
- Keep the workplace clean before leaving the laboratory.
- Avoid raising chemical solutions, glass containers, or other devices above eye level.