

Balances

are essential laboratory instruments that are widely used for weighing of various substances (powders, crystals and others) in the laboratories. For instance, to prepare reagents, stains and culture media, balances are required to weigh accurately and precisely within the needed range.

Types of balances in medical laboratory may be:

- a) Rough balances (mechanical balances).
- b) Analytical balances (Sensitive balance).

a) Rough balances:

Rough balances are mechanical balances found in several types, some of them comprise is sliding scale and some have a single or double pan. While it operating, not require mains electricity or battery power and less expensive than analytical balances.

the using of rough balance in:

1. To weigh large amounts (gram to several kilograms).
2. When a high degree of accuracy is not required.



b) Analytical balances (Sensitive balance):

Sensitive balances are electronic balances that comprise of single pan balances that use an electron magnetic force instead of weights and found in inside a glass case. It requires mains electricity or battery power. Sensitive balances are a highly sensitive instrument that most used balances in medical laboratories to provide a precision and accuracy for reagent and standard preparation.

the using of sensitive balance in:

1. To weigh small quantities usually in gram (gm) to milligram (mg) range, example 2.750 mg, 0.450 mg, 250 mg, in microbiology and pharmaceutical and chemical laboratories.
2. When great accuracy is required the using of sensitive balance.



Analytical balances

Operating and care of Sensitive balances

1. Always handle a balance with care.
2. Position the balance on a bench away from vibration and direct sunlight.
3. Before starting to weigh, zero the balance as directed by press the TARE or ZERO.
4. Put the container (dish, a beaker, a piece of folded paper or filter paper) and weigh the container first.
5. Press the TARE or ZERO button to get a reading of 0.00 g.
6. Put the material, and weigh the material at room temperature in a weighing the container. Never put the material directly on the balance pan.

7. When your finished with the balance, return the weights back to zero. Then it will be ready for the next person to use it.
8. Always use forceps to add or remove the material.
9. Protect the balances from dust, moisture and fungal growth.
10. Use small brush to remove any chemical, which may have been spilt on the balance.
11. Keep the balance is clean.

