

Diploma in Pharmacy 1st Year

Human Anatomy & Physiology Practical

To determine haemoglobin content of blood

Aim:

To determine haemoglobin content of blood

Reference :

Dr. Gupta G.D , Dr. Sharma Shailesh , Dr. Sharma Rahul Kumar ,
“Practical Manual of Human Anatomy and Physiology” Published by Nirali
Prakashan , Pg.No 63 - 66

Material and Apparatus Required

Spirit, cotton, needle, Sahli-Hell haemoglobinometer, 0 IN HCl and distilled water.

Theory :

RBCs are discotic-shaped cells constituting 99% of the blood and carrying haemoglobin molecules. Each cell is surrounded by a colourless envelope covering a semi-liquid material having 65% water and 35% solids of which 33% constitutes haemoglobin bound to 2% stromal meshwork of protein, phospholipids, cholesterol, cholesterol esters, and neutral fat.

The normal range for haemoglobin is 13.5 to 17.5 grams per decilitre for men and 12.0 to 15.5 grams per decilitre for women.

Procedure

1. The labelled tube should be filled with 0. IN HCl to the lowest point.
2. The finger should be sterilised with 70% alcohol
3. A bold prick should be done with the help of a 23 size needle
4. The blood should be sucked into the pipette.
5. Blood should be collected upto 20µl maximum.
6. Then the blood should be mixed with the acid in the graduated tube.

7. The blood and the acid mixture should be mixed properly with the given stirrer
8. It should be kept undisturbed for 2-5 minutes.
9. After that the distilled water should be added drop by drop to dilute the quantity in the graduated tube
10. The dilution should be continued till the colour of the solution becomes same as the colour of the comparator.
11. When the colour matches, the graduated tube should be taken out from the stand and the amount of solution in the tube should be recorded.
12. The amount of haemoglobin present in the blood should be obtained.

Result:

The amount of haemoglobin present in the sample was found to be

The haemoglobin level was found to be in _____ range.