

the nerves with forceps. (vi) ...
NaCl solution.

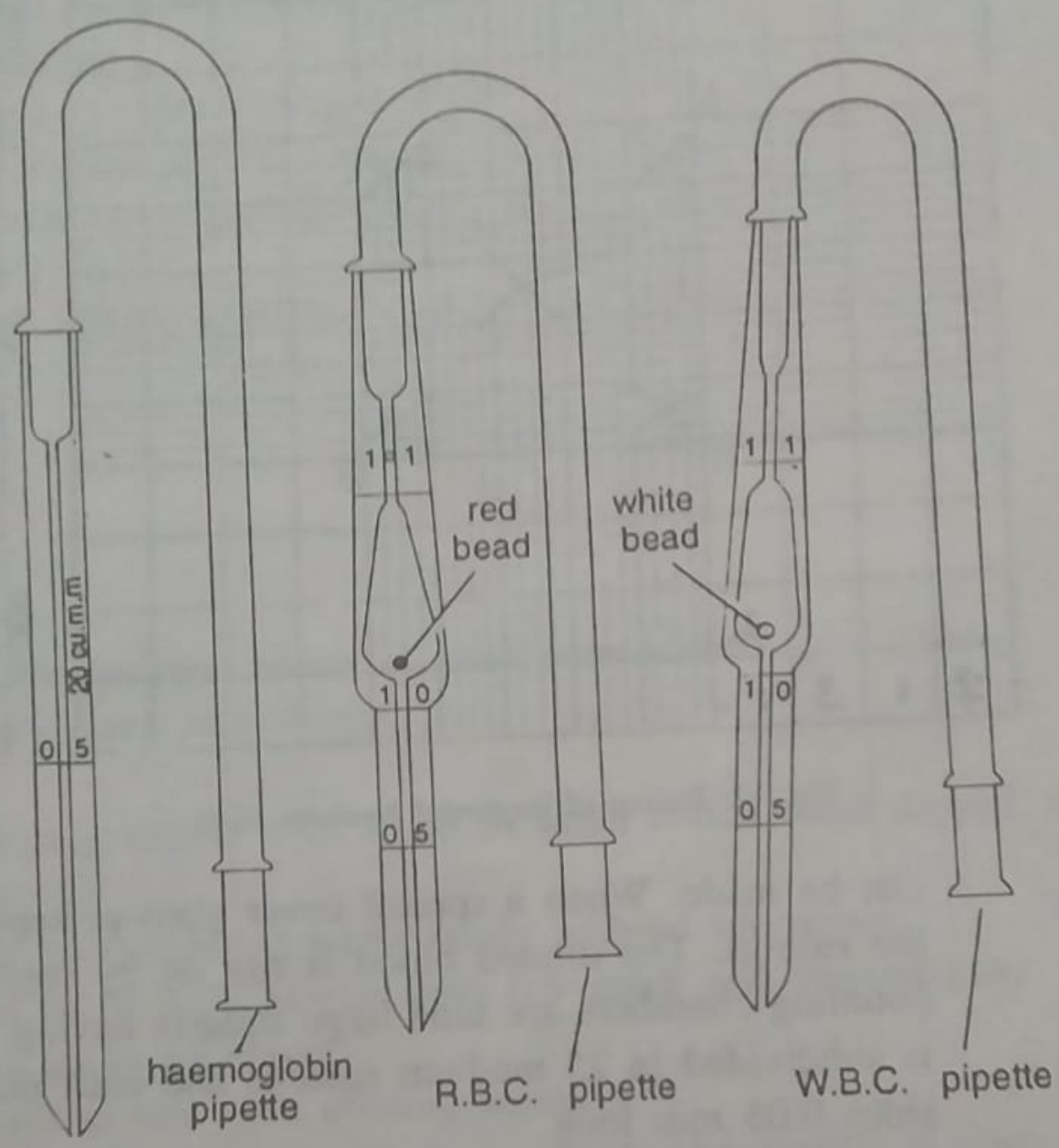


Fig. 10. R.B.C., W.B.C. and haemoglobin pipettes.

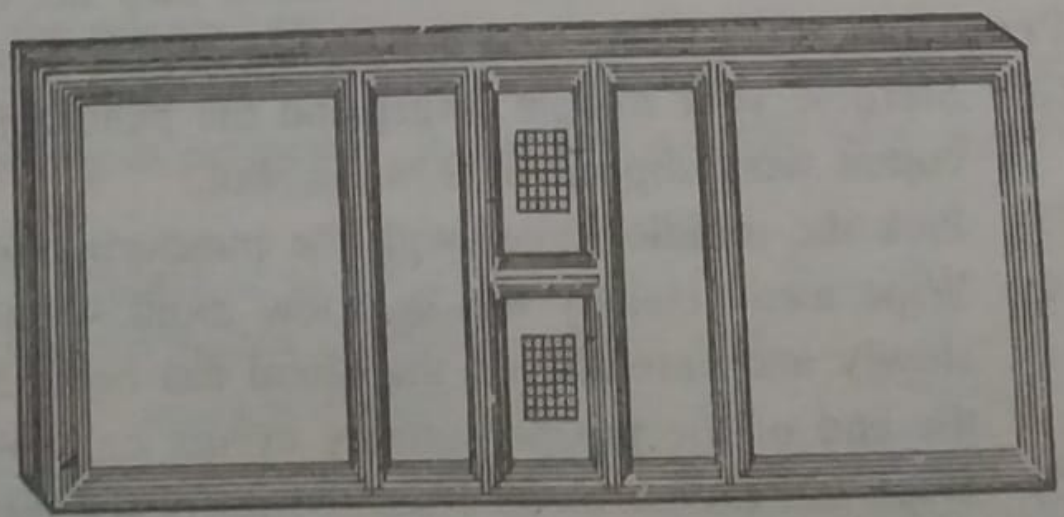


Fig. 11. The Burkler Hawksley counting slide.

Suppose, ...
 One smallest square will contain $A+B+C+D+E // 80$ R.B.Cs.
 400 smallest squares will contain $A+B+C+D+E \times 400 // 80$ R.B.Cs.
 But, height of chamber = 0.1 mm and dilution of blood = 200 times.
 Therefore, one cubic mm of blood will contain :

$$\frac{A+B+C+D+E}{80} \times 400 \times 10 \times 200 \text{ R.B.Cs.}$$

$$= A+B+C+D+E \times 10000 \text{ R.B.Cs.}$$

Experiment (2) : Enumerate the total W.B.C. (leucocytes) count of your own blood.

Apparatus : W.B.C. pipette, haemocytometer, Hayem's fluid, microscope.

Procedure : (1) Clean and dry the W.B.C. pipette.

- (2) Sterilise the tip of your middle finger and puncturing needle with a pad of small cotton wool dipped in 90% alcohol.
- (3) Prick the sterilised finger deeply with the needle so that blood oozes freely without squeezing.
- (4) Discard the first drop and then suck the blood in W.B.C. pipette upto 0.5 mark and immediately dilute the blood with Hayem's solution 20 times up to 11 marks.
- (5) Rotate the pipette slowly so as to allow the blood to mix with diluting solution.
- (6) Place clean coverslip on already cleaned counting chamber and add immediately and rapidly a drop of mixture to the edge of the coverslip after discarding the clear fluid in the capillary part. Allow the corpuscles to settle down and make a count under the microscope.
- (7) The white cells are recognised under low magnification by their refractile appearance and by slight colour given to them by the diluting fluid. The counting is performed in the four corners of 1 square millimeter.

Calculation : The number of leucocytes per cubic mm is calculated as follows :

$$\text{Number of leucocytes per cubic mm} = \frac{\text{Number of cells counted} \times \text{Dilution} \times 10}{\text{Number of 1 sq. mm. counted}}$$

Experiment (3) : Find out the haemoglobin percentage of your own blood.

Requirements : Haemoglobinometer and N/10 HCl.

Procedure : (1) Prick the finger as described earlier, discard the first drop and suck the blood in the pipette upto 0.2 ml mark.

Calculation

No. of WBC per cubic mm =

$$\frac{\text{No. of cells counted} \times \text{Dilution} \times 10}{\text{No. of } 1 \text{ mm}^2 \text{ square counted}}$$

$$= \frac{A + B + C + D \times 20 \times 10}{4}$$

$$A + B + C + D \times 50$$

$$= (30 + 31 + 32 + 28) \times 50$$

$$= 121 \times 50$$

$$= 6050 \text{ mm}^3 / \text{cubic}$$