**Lab sheet**

**1-Determination of Hematocrit (HCT)**

1-The blood of a colleague may be taken in a heparinized capillary tube or a blood sample in such a tube may be used which has been taken not more than 6 hours before

and stored at 4oC.

2- Seal the dry end of the tube, and centrifuge for 5 min.

3- The column of red cells will be seen, topped by the grayish-red layer of leukocytes and above this a thin creamy layer of platelets, the “Buffy coat”.

4- Measure the length of the column of red blood cells (A),

and the total length of blood components (B).

**Calculation:**

**HCT= Length of column of RBC x 100**

**Total length of blood component**

**Normal ranges:**

**Male: 40.7 - 50.3% Female: 36.1 - 44.3%**

**2-Determination of Erythrocyte Sedimentation Rate [ESR]**

In this technique, cells are allowed to sediment under the effect of gravity, using a Westergren’s tube. 106 cc of blood is drawn out from the vein of a subject by a syringe. Transfer it into an EDTA tube, and thend raw the blood up into a Westergren’s tube exactly to the zero mark. The tube is placed upright in the rack and left undisturbed. The length of the column of clear plasma at the top is noted at the end of 1 hour.

**Normal range**

**Men 🡪 0 - 5 mm/ hr**

**Women 🡪 0 - 10 mm/hr**