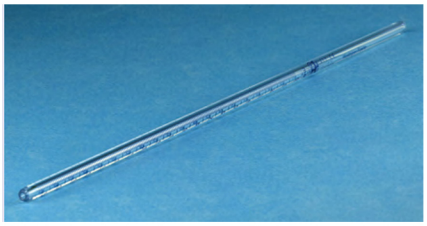
ERYTHROCYTE SEDIMENTATION RATE (ESR)

The ESR is a simple non-specific screening test that indirectly measures the presence of inflammation in the body. It reflects the tendency of red blood cells to settle more rapidly in the face of some disease states, usually because of increases in plasma ibrinogen, immunoglobulin, and other acute-phase reaction proteins. Changes in red cell shape or numbers may also affect the ESR.

TWO PIPETTES AVAILABLE:

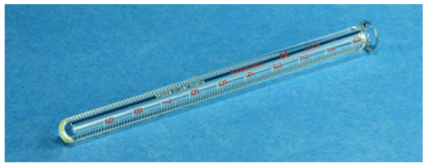
There are two main pipettes used to measure the ESR: the Westergren Pipette and the Wintrobe Pipette. Each pipette produces slightly different results.

WESTERGREN METHOD

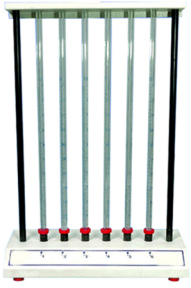


The Westergren method requires collecting 2 ml of venous blood into a tube containing 0.5 ml of sodium citrate. It should be stored no longer than 2 hours at room temperature or 6 hours at 4 °C. The blood is drawn into a Westergren-Katz tube to the 200 mm mark. The tube is placed in a rack in a strictly vertical position for1hour at room temperature, at which time the distance from the lowest point of the surface meniscus to the upper limit of the red cell sediment is measured. The distance of fall of erythrocytes, expressed as millimeters in 1 hour, is the ESR.

WINTROBE METHOD



The Wintrobe method is performed similarly except that the Wintrobe tube is smaller in diameter than the Westergren tube and only 100 mm long. EDTA anticoagulated blood without extra diluent is drawn into the tube, and the rate of fall of red blood cells is measured in millimeters after 1 hour. The shorter column makes this method less sensitive than the Westergren method because the maximal possible abnormal value is lower. However, this method is more practical for demonstration purposes



ESR PIPETTE STAND

- The Pipette Stand is designed to hold Pipette tubes.
- Capable of holding 10 ESR Pipette exactly in vertical position

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