

**TEST: ERYTHROCYTE SEDIMENTATION RATE (ESR)**

**PRINCIPLE:**

The Erythrocyte Sedimentation Rate (ESR) is a nonspecific assay used to screen for the presence or absence of active disease. The settling of red corpuscles (red blood cells - RBCs) is due to the differential densities of the RBCs and their medium. Most often, an increased ESR is due to an increased amount of plasma proteins (i.e., acute phase globulins and less commonly to inherent characteristics of RBCs (Wintrobe 30). ESR is measured in mm/hr using the Modified Westergren Method.

**SPECIMEN REQUIREMENTS:**

Whole blood collected in EDTA is the only acceptable specimen. The specimen must be kept and transported at room temperature, and the test setup must be within 12hr of collection. Clotted or hemolyzed samples are not acceptable.

**METHOD: SEDIPLAST WESTERGREN**

**REFERENCES:**

1. Lee, G. Richard et al. *Wintrobe's Clinical Hematology* 9<sup>th</sup> ed., Lea and Febiger, Philadelphia, 1993.
2. SmithKline Beecham Directory of Services Reference Guide 1997 – 1998.
3. Streck ESR – Chex Product Insert 1998

**Normal Range :**

|                            | <b>Male</b>    | <b>Female</b>  |
|----------------------------|----------------|----------------|
| <b>50 yrs. old or less</b> | <b>15mm/h</b>  | <b>20mm/hr</b> |
| <b>Over 50 yrs old</b>     | <b>20mm/hr</b> | <b>30mm/hr</b> |

**Turnaround time:** One Day