



Name: MAST.SHAURYA SAWANT Age/Gender: 1 Year(s) 0 Month(s) 0 Day(s)/Male  
 Referred By: DR.JYOTHI SHETTY Client Name: N.A  
 Collection Date: 14-08-2021 09:00:00 Report Release Date: 14-08-2021 23:52:53

Sr.No	Investigation	Observed Value	Reference Range	Unit
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**Iron Studies (Iron, TIBC, Transferrin saturation)**

1	<b>Iron</b> Serum, Method: Ferene	17.23	65 - 175	µg/dL
2	<b>TIBC</b> Serum, Method: Ferene	530.66	250-450	µg/dL
3	<b>Transferrin saturation</b> Serum, Method: Calculated	3.25	20 - 50	%

**Interpretation**

1. Serum iron measures the level of iron in the liquid portion of the blood. Low iron levels may be seen in anemia (microcytic and hypochromic). High levels of serum iron in hereditary hemochromatosis, multiple blood transfusions, and a few other conditions.
2. TIBC (Total iron-binding capacity) measures all the proteins in blood available to bind with iron, including transferrin. TIBC test is a good indirect measurement of transferrin. The body produces transferrin in relationship to the need for iron. When iron stores are low, transferrin levels increase and vice versa. Since transferrin is the primary iron-binding protein, the TIBC test is a good indirect measurement of transferrin availability.

**End Of Report**



Scan To Verify

CRM No :3032488  
 Sample Recd. Time: 14-08-2021 09:04  
 Report Time: 14-08-2021 23:52  
 Patient Name: MAST.SHAURYA SAWANT  
 Patient ID: 3032488

*Anju Dhar*  
 Authorized Signatory  
 Dr Anju Dhar  
 MD (Microbiologist)

*Varsha*  
 Authorized Signatory  
 Dr. Varsha Deshpande  
 DCP, DNB (Pathology)



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**Reticulocyte Count**

1	<b>Reticulocyte Count</b> EDTA Whole Blood, Method: Manual	3.5	0.5 - 2.5	%
2	<b>Reticulocyte Production Index</b> EDTA Whole Blood, Method: Calculated	1.57	0.5 - 2.5	%

**Interpretation**

Reticulocytes are juvenile non-nucleated red cells containing aggregates of ribosomal ribonucleic acid (RNA) in their cytoplasm. In the process of erythropoiesis (red blood cell formation), reticulocytes develop and mature in the bone marrow and then circulate for about a day in the blood stream before developing into mature red blood cells. The reticulocyte count is used to estimate the degree of effective erythropoiesis which is reported as reticulocyte percentage. Increased reticulocyte count reflects ongoing or recent RBC production activity, which may result from the following: Post bleeding (trauma, gastrointestinal bleeding, menorrhagia) Post hemolysis (hemolytic anemia, hemolytic disease of the newborn)

Response to therapy (iron supplementation, vitamin B-12 or folic acid supplementation, erythropoietin supplementation, bone marrow recovery following chemotherapy or bone marrow transplantation) A decreased reticulocyte count reflects decreased RBC production, which may result from the following: Vitamin B-12, folic acid, and iron deficiency (megaloblastic anemia, pernicious anemia, iron deficiency anemia)

Decreased erythropoietin level (chronic renal failure) Aplastic anemia or bone marrow failure syndromes Post radiation therapy Bone marrow replacement by benign (metabolic storage diseases, infection, sarcoidosis) or malignant processes (leukemias, involvement by lymphomas or metastatic tumors) Reticulocyte index / Reticulocyte production index (RPI) The reticulocyte index, or reticulocyte production index (RPI), which is corrected or adjusted for both premature release of reticulocytes from the bone marrow and the degree of anemia, is another parameter that provides an assessment for adequate bone marrow response to anemia.

(RPI) Reticulocyte Production Index:

$$[\text{Reticulocyte \%} \times \text{Patient's PCV}] / [\text{Maturation time (in days)} \times \text{Mean PCV}]$$

An increased RPI (RPI >3) can be seen in the following scenarios:

Hemolytic anemias, Recent hemorrhage, Marrow response to therapy. A decreased RPI (RPI < 2) can be seen in the following:

Hypoproliferative disorder (ie, aplastic anemia), Ineffective erythropoiesis, as seen in megaloblastic anemia.



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