IRON, PLASMA

London Health Sciences Centre | St. Joseph's Health Care London
Pathology and Laboratory Medicine

Orderable - FE

Turn Around Time: 4 hours **STAT: 1 hour**

Laboratory:
Core Lab

Requisition:
GENERAL LABORATORY REQUISITION

Method of Analysis:
Colorimetric

Test Schedule:
As required

Specimen:

Adult	Pediatric
4.5 mL Green top Vacutainer tube	0-2 years: 0.6 mL Green Microtainer 2-10 years: 3 mL Green top tube

Collection Information:

Collect blood aseptically in a Vacutainer tube.

Reference Ranges:

Male	Female
8-29 µmol/L	7-26 µmol/L

Interpretive Comments:

Useful in confirming the diagnosis of iron-deficiency anemia or hemochromatosis.

Assessment of patients with acute iron poisoning. Serum ferritin is the preferred method for assessing iron stores.

The concentration of iron in serum/plasma is dependent on the diet and is subject to circadian variations. Values are higher in A.M.
Increased levels found with liver damage, hemoylytic anemia, pernicous anemia, hemochromatosis and transfusion siderosis.

Decreased levels found in iron deficiency, malabsorption, and after blood loss.

Toxicity possible in children consuming large amounts of vitamins containing iron.

In patients treated with iron supplements or metal-binding drugs, the drug-bound iron may not properly react in the test, resulting in falsely low values.

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In the presence of high ferritin concentrations > 1200 µg/L the assumption that serum iron is almost completely bound to transferrin is not valid anymore. Therefore, such iron results should not be used to calculate Total Iron Binding Capacity (TIBC) or percent transferrin saturation (% SAT).

In very rare cases, gammopathy, in particular type IgM (Waldenströms macroglobulinemia, may cause inreliable results.

Comments:

Plasma samples containing RBC hemolysate may have slightly increased iron values.