

---

**Lab Dept:** Chemistry

**Test Name:** IRON/TIBC

---

***General Information***

**Lab Order Codes:** FEPR (Total Iron, Total Iron Binding Capacity and % Saturation)

FE (Total Iron Only)

TIBC (Total Iron Binding Capacity Only)

**Synonyms:** Iron and Total Iron - Binding Capacity, FE, IBC, TIBC

**CPT Codes:** 83540 – Iron  
83550 – Iron binding capacity

**Test Includes:** Includes total iron (mcg/dL), total iron binding capacity (mcg/dL), and percent iron saturation.  
**Note:** If total iron only or Total Iron Binding Capacity Only is ordered only that particular test will be performed.

---

***Logistics***

**Test Indications:** Useful for the diagnosis of anemia and to evaluate iron toxicity (from ingestion). Iron deficiency and iron overload are the major disorders of iron metabolism, however, altered iron metabolism has been observed or shown to be related to a number of other diseases including anemia, cardiovascular disease, chronic hepatitis, end-stage renal disease, HIV infection, and other infections.

**Lab Testing Sections:** Chemistry

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 4 hours, Stat: 2 hours

**Special Instructions:** N/A

---

***Specimen***

**Specimen Type:** Blood

**Container:** Red, marble or gold top tube

<b>Draw Volume:</b>	1 mL blood
<b>Processed Volume:</b>	0.3 mL serum
<b>Collection:</b>	Routine venipuncture, preferred morning collection
<b>Special Processing:</b>	Lab Staff: Centrifuge specimen, remove serum aliquot into plastic sample cup. Analyze specimen immediately or store at refrigerated temperatures.
<b>Patient Preparation:</b>	Patient should be fasting. Morning values are 30% higher. Iron values remain elevated for several weeks after administration of therapeutic compounds.
<b>Sample Rejection:</b>	Mislabeled or unlabeled specimen; specimens other than serum; gross hemolysis

***Interpretive***

**Reference Range:**

<b>Iron</b>	
0 – 2 months:	100 – 250 mcg/dL
2 months – 2 years:	40 – 100 mcg/dL
2 years – adult:	50 – 120 mcg/dL
<b>Total Iron Binding Capacity</b>	
0 – 2 years:	100 – 400 mcg/mL
>2 years:	250 – 400 mcg/mL
<b>Percent Saturation</b>	
11 - 46%	

**Critical Values:** N/A

**Limitations:** Hemolysis elevates the serum iron. Excess bilirubin in the patient sample decreases serum iron. Measurements of TIBC may be inaccurate if performed within 14 days of IV iron dextran administration. Ferrous sulfate (250 mcg/dL) and hemolysis (200 mcg/dL) increase TIBC results.

**Methodology:** Ferene

**References:**

Siemens Dimension Vista ® IRON Flex® reagent cartridge Instructions for Use, Siemens Healthcare Diagnostics, PN 717085.001 Issue Date 2013-08-20 D PN 781085.001 – US

Siemens Dimension Vista ® IRON Calibrator Instructions for Use, Siemens Healthcare Diagnostics, July 11, 2014

Jacobs & DeMott Laboratory Test Handbook (2001) Lexi-Comp, Inc, Hudson, OH, 5th Edition

Biorad Multiquel Chemistry Control Product Insert Bio-Rad Laboratories, Irvine, CA 92618

**Updates:**

9/4/14: Vista update and addition of Patient Prep info.

2/9/2016: Update container types