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**Lab Dept:** Chemistry

**Test Name:** IRON/UIBC

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***General Information***

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

FE (Total Iron Only)

UIBC (Unsaturated Iron Binding Capacity)

**Synonyms:** Iron Profile; 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 iron only or Unsaturated Iron Binding Capacity Only is ordered only that particular test will be performed.

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***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

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***Specimen***

**Specimen Type:** Blood

<b>Container:</b>	Red, marble or gold top tube Alternate: Green (LiHep) tube
<b>Draw Volume:</b>	1 mL blood
<b>Processed Volume:</b>	0.3 mL serum/plasma
<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>	
<b>Female</b>	
0 – <14 years:	16 – 128 mcg/dL
14 – <19 years:	20 – 162 mcg/dL
Adult:	50 – 170 mcg/dL
<b>Male</b>	
0 - <14 years:	16 – 128 mcg/dL
14 - <19 years:	31 – 168 mcg/dL
Adult	65 – 175 mcg/dL
<b>UIBC</b>	
Male	69 – 240 mcg/dL
Female	70 – 310 mcg/dL

**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:** Abbott Alinity c Iron Reagent Kit Instructions for Use, Abbott Diagnostics Division, Abbott Park, IL, 60064, USA, Revised February 2018

Abbott Alinity c Iron Calibrator Package Insert, Abbott Diagnostics Division, Abbott Park, IL, 60064, USA, Revised March 2018

Bio-Rad Liquichek Multiqual 1,2,3, Unassayed Control Package Insert, Bio-Rad Laboratories, Irvine, CA, USA

CALIPER Reference Range Studies, Accessed October 27, 2020

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

Abbott Alinity c UIBC Reagent Kit Instructions for Use, Abbott Diagnostics Division, Abbott Park, IL, 60064, USA, Revised March 2018

Abbott Alinity c UIBC Calibrator, Abbott Diagnostics Division, Abbott Park, IL, 60064, USA, Revised February 2018

Biorad Multiqual 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  
6/21/2019: Update container type to include LiHep plasma  
11/23/2020: Updated for Method Abbott, Siemens Vista removed.  
8/28/2023: Updated Synonyms