Lab Dept: Chemistry

Test Name: IRON/UIBC

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 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.

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
Alternate: Green (LiHep) tube

Draw Volume: 1 mL blood

Processed Volume: 0.3 mL serum/plasma

Collection: Routine venipuncture, preferred morning collection

Special Processing: Lab Staff: Centrifuge specimen, remove serum aliquot into plastic sample cup. Analyze specimen immediately or store at refrigerated temperatures.

Patient Preparation: Patient should be fasting. Morning values are 30% higher. Iron values remain elevated for several weeks after administration of therapeutic compounds.

Sample Rejection: Mislabeled or unlabeled specimen; specimens other than serum; gross hemolysis

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Interpretive

Reference Range:

Iron	
Female	
0 – <14 years:	16 – 128 mcg/dL
14 – <19 years:	20 – 162 mcg/dL
Adult:	50 – 170 mcg/dL
Male	
0 - <14 years:	16 – 128 mcg/dL
14 - <19 years:	31 – 168 mcg/dL
Adult	65 – 175 mcg/dL
UIBC	
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.