



3. This iron test is very sensitive.  
To avoid contamination the glassware used must be iron free.  
We strongly recommend to use disposable laboratory materials when performing this test.
4. Bilirubin up to 15 mg/dL and copper up to 500 µg/dL do not interfere.

**Spectrum Diagnostics does not interpret the results of a clinical laboratory procedure; interpretation of the results is considered the responsibility of qualified medical personnel. All indications of clinical significance are supported by literature reference.**

**Performance Characteristics**

**Precision**

Within run (Repeatability)

	Total Iron	
	Level 1	Level 2
n	20	20
Mean (µg/dL)	159	344
SD	2.1	1.9
CV%	2.3	0.57

Run to run (Reproducibility)

	Total Iron	
	Level 1	Level 2
n	20	20
Mean (µg/dL)	162	351
SD	2.9	2.6
CV%	2.9	0.68

**Methods Comparison**

A comparison between Spectrum Diagnostics Iron reagent and a commercial reagent of the same methodology was performed on 20 human sera. A correlation of 0.983 was obtained.

**Sensitivity**

When run as recommended, the sensitivity of this assay is 12 µg/dL for serum iron.

**Linearity**

The reaction is linear up to iron concentration of 500 µg/dL, Specimens showing higher concentration should be diluted 1+1 using physiological saline and repeat the assay (result × 2).

**Interfering Substances**

**Serum, plasma**

**Haemolysis**

No interference up to haemoglobin level of 5 g/L (0.3 mmol/L) in determining serum iron and up to 1 g/L for TIBC.

**Icterus**

No significant interference up to a bilirubin level of 30 mg/dL.

**Lipemia**

Lipemic specimens are not recommended since they may cause negative bias. Lipemic specimens can be diluted before assay and the dilution factor should be considered during calculation.

**Anticoagulants**

Citrate, EDTA, and oxalate should be avoided.

**Expected values**

**Iron**

Adults Women : 37 – 145 µg/dL  
Men : 55 – 175 µg/dL

**Analytical Range**

Iron : 12 – 500 µg/dl (0.9 – 89.5 µmol/ L).

**Waste Disposal**

This product is made to be used in professional laboratories. Please consult local regulations for a correct waste disposal.

**S56:** dispose of this material and its container at hazardous or special waste collection point.

**S57:** use appropriate container to avoid environmental contamination.

**S61:** avoid release in environment. refer to special instructions/safety data sheets.

**References**

1. Bauer JD. Haemoglobin, porphyrin, and iron metabolism. In: Kaplan LA, Pesce AJ, ed. Clinical Chemistry, theory, analysis, and correlation. ST. Louis: Mosby Company:1984:611-655.
2. Fairbanks VF, Klee GG. Biochemical aspects of hematology. In : Tietz NW, ed. Fundamentals of clinical chemistry. 3rd ed. Philadelphia: WB saunders:1987:789-824.
3. Stookey LL. Ferrozine-a new spectrophotometric reagent for iron. Anal Chem. 1970;42:779-781.
4. Viollier MA, Gschwind H, Schläpfer P. Neue serum-eisenbestimmung auf dem GSA II. Lab Med. 1980;4:240-244.
5. Williams HL, Johnson DJ, Haut MJ. Simultaneous spectrophotometry of Fe<sup>2+</sup> and Cu<sup>2+</sup> in serum denatured with guanidine hydrochloride. Clin Chem. 1977;23:237-240.

ORDERING INFORMATION	
CATALOG NO.	QUANTITY
269 001	2 x 25 ml
269 002	4 x 25 ml
269 003	2 x 50 ml



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