]

IRON

COD 2201 ml 60 x 4
STORE AT 2 8° C
Reactifs for mesurement of iron concentration Only for in vitro use in clinical laboratory

JOURILABS

FERROZINE Method
Liquid Reagent

PRINCIPLE

In slightly acid medium, iron is completely released from transferrin after reducing the ferric iron to ferrous by hydroxylamine.
The ferrous iron reacts with FERROZINE to produce a color complex. The intensity of the color is proportional to the iron concentration.

REFERENCE VALUES

Men	60-175 µg/dl
Women	50-170 µg/dl

These ranges are given for only orientation, each laboratory should establish its own normal ranges.

SAMPLES

Serum free of hemolysis or heparinized plasma
Serum iron is stable 7 days et 2-8ºC

REAGENTS

R_1:

Sodium Acetate	400 mmol/l
Hydroxylamine chlorhydrate	0.6 mol/l
Guanidine chloride	1 mol/l

R_2 :

Sodium Acetate	400 mmol/l
Ferrozine	8.0 mmol/l

R_3 :

Standard	200 µg/dl

The reagents are ready to use and stable until the expiry date stated on label. (Avoid direct exposure to light)

PROCEDURE

Wavelength	560 nm
Temperature	25ºC /37ºC
Cuvette	1 cm light path
Method	Endpoint - increasing

Bring the reagent to room temperature, pipette into labeled test tubes;

	Reagent blank	Standard	Sample Blank	Sample
Standard	-	0.2 ml	-	-
Serum	-	-	0.2 ml	0.2 ml
Water	0.2 ml	-	40 ul	-
R1	1 ml	1 ml	1ml	1 ml
R2	40 ul	40 ul	-	40 ul

Mix vigorously until serum proteins have been completely dissolved and incubate 5 minutes at room temperature, read the optical density of the sample blank against distilled water and read the optical density of samples and the standard against the reagent blank.

CALCULATION

Iron Concentration =

$$\frac{\text{O.D Sample} - \text{O.D Sample blank}}{\text{O.D Standard}} \times \text{C. Standard}$$

QUALITY CONTROL

Each laboratory should establish its own internal control scheme and procedures for corrective action if controls do not recover within the acceptable tolerances.

PERFORMANE CHARACTERISTICS

Detection limite: 4ug/dl
Linearity: 500ug/dl, dilute sample ½ with distillied water and repeat measurement if got higher values.
Repeatibility (with run)

	CV	N
116 ug/dl	2.3%	15
172 ug/dl	1.0%	15

Reproductibility (run to run)

	CV	N
116 ug/dl	3.0%	15
172 ug/dl	2.7%	15

Trueness: Results obtained with thus reagents (jourilabs) did not show systematic difference when compared with other commercial reagents use the same method.
Interference: Bilirubine does not interfere, Do not use lipemic sera (TRIGLYCERIDES > 15g/l) other drugs and substances may interfere.
The performance characteristic have been obtained using an analyzer, results may vary if manual procedure is used.

NOTES

- Do not introduce pipettes in any of the reagent bottles so as to avoid any possible contamination.
- Sample and reagent volumes may be varied as long as the ratio is maintained.

PRESENTATION

4 X 60 ml Cat No 2201 240 Tests

BIBLIOGRAPHY

- Caraway W.T.,Clin.Chem.,9,188,(1963).
- Coodwin J.F., Murphy B.,Guillemette M., Clin. Chem., 12, 47,(1966).

]

IRON

COD 2201 ml 60 x 4
STORE AT 2 8° C
Reactifs for mesurement of iron concentration Only for in vitro use in clinical laboratory

JOURILABS

FERROZINE Method

Liquid Reagent