IRON CAB

Colorimetric Method with Chromazurol

Liquid Reagent ready to use

REF. 4075 2x100 ml
REF. 4065 4x100 ml
REF. 4085 4x250 ml

CE IVD

Azienda certificata DNV

GIESSE DIAGNOSTICS

INTENDED USE

Quantitative determination of iron in serum.

PRINCIPLE

The serum iron bound to transferrin is released in an acid environment. Iron ions react with the Chromazurol-B and cetyltrimethylammonium bromide (CTMA) forming a ternary complex colored in blue. The color intensity is directly proportional to the amount of iron present in the sample.

SAMPLE

Fresh serum. Do not use hemolyzed samples.

Separate serum from clot as soon as possible.

The iron in the sample is stable 4 daysi at room temperature and at least one week at 2-8°C.

KIT COMPONENTS

Reagent (A) Fe CAB Volume = 100/250 ml	Buffer pH 4.8 CTMA Complexing Chromazurol B	50 mmol/l 1.5 mmol/l 1.0 mmol/l 1.0 mmol/l
Standard Fe Volume = 10 ml	Iron	100 µg/dl (17.9 µmol/l)

The reagents are stable until the expiration date indicated on the label if stored at 2-8°C. Once opened reagents are stable for 2 months at 2-8°C if contamination is avoided.

Keep bottles closed when not in use.

REAGENT PREPARATION

Liquid red Reagent, ready to use.

A blue coloration of the reagent indicates pollution of the same.

PRECAUTIONS AND WARNINGS

Reagent may contain some non-reactive and preservative components. It is suggested to handle carefully it, avoiding contact with skin and swallow.

Use the normal precautions required in the laboratory.

Dispose of waste according to local laws.

PROCEDURE

Wavelength:	623 nm (620 – 640)
Lightpath :	1 cm
Temperature:	25/30/37°C
Reading:	against blank reagent
Method:	End Point
Sample/Reagent	1/20

pipette:	blank	sample	standard
Reagent (A)	1000 µl	1000 µl	1000 µl
water	50 µl		
sample		50 µl	
standard			50 µl

Mix, incubate for 4 minutes at 37°C or 8 minutes at 20-25°C, read the absorbance of the sample (Ax) and the Standard (As).

The manual readings are influenced by temperature. Do not read the O.D. over 12 minutes at room temperature.

For readings outside the prescribed wavelength interval, use proteic calibrator instead of the standard.

Reaction volumes can be proportionally varied.

For automated procedure, ask for specific applications.

RESULTS CALCULATION

Iron µg/dl = Ax/As x 100 (Standard Value)

EXPECTED VALUES

Men:	**60 – 160**	**µg/dl**	**(10.6 – 28.3 µmol/l)**
Women:	**37 – 145**	**µg/dl**	**(6.6 – 26 µmol/l)**

Each laboratory should establish appropriate reference intervals related to its population.

QUALITY CONTROL

You must perform the controls at each kit's use and verify that the values obtained are within the reference range reported in the operating instructions. For this purpose we recommend the use of control sera: PRECISENORM (REF.6000) and PRECISEPATH (REF.6001).

PERFORMANCE

Sensitivity: the sensitivity of the method: 3.85 µg/dl.

Linearity: the method is linear up to 650 µg/dl. For higher values, dilute the sample 1:2 and multiply the result by 2.

Precision intra-assay:

	Level 1	Level 2
Mean (µg/dl)	106.41	178.48
DS	2.12	1.54
CV %	1.99	0.86

Precision inter-assay:

	Level 1	Level 2
Mean (µg/dl)	107.69	179.15
DS	6.65	4.65
CV %	6.20	2.60

Interferences: the copper does not intefere up to 500 µg/dl. Triglycerides do not interfere up to 2000 mg/dl.

Hemoglobin interferes with the test. Do not use hemolyzed samples.

Correlation against a reference method: Y = 0.947x + 0.387 r = 0.973

REFERENCES

1. Garcie A.: Chim. Acta 94:115 (1979).
2. Vassault, A. et al. Ann. Biol. Clin., 44,686 (1986).
3. Young D. S., et al, Clin. Chem. 21:1D (1975).

Giesse Diagnostics srl

Via Cervinara, 45 – Colle Prenestino – Roma – Italia. Tel. +39 06 22429353 / +39 06 22429097 – Fax +39 06 22429098

e-mail: info@giessediagnostics.com – web site: www.giessediagnostics.com

406507

Ed. 2012/03 rev. 00