Magnesium

Stable Liquid Reagent
Colorimetric method by using Xylidyl blue
Store at room temperature

PRINCIPLE

In alcaline medium, Xylidyl blue reacts with Magnesium to form colored complex. The intensity of the color is proportional to the Magnesium concentration. EGTA eliminates the Ca interference.

REFERENCE VALUES

Serum or plasma	1.8 – 2.9 mg/dl
CFS	2.4 – 3.1 mg/dl
Urine	1 – 10 mg/dl

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

SAMPLES

Serum free of hemolysis or heparnized plasma, CFS, Urine diluted 1/3 with distilled water, acidified to pH 3-4 with HCl.

REAGENTS

R_1 :

Xylidyl blue	1.0 mmol/l
EGTA	0.1 mmol/l
Tris	200 mmol/l
Na_2Co_3	100 mmol/l

R_2 :

Standard	2.42 mg/dl

The reagent is ready to use and stable until the date printed on the label. Avoid direct light and keep the bottles closed after use.

PROCEDURE

Wavelength	520 nm (500-550)
Temperature	25ºC
Cuvette	1 cm light path
Method	Endpoint - increasing

If the absorbance of the working reagent is higher than 1.2 at 492nm the reagent can not be used.

	Blank	Standard	Sample
Sample	-	10µl	-
Standard	-	-	10µl
Reagent	1 ml	1 ml	1 ml

Mix and incubate 5 minutes at room temperature. Read against Blank. The color is stable 1 hour.

CALCULATION

Magnesium Concentration =

$$\frac{\text{O.D Sample}}{\text{O.D Standard}} \times \text{Standard concentration}$$

LINEARITY

Up to 5.0 mg/dl.

SPECIFICATION

Bilirubin 0.5g/l, lipid 10g/l, glucose 10g/l and ascorbic acid 0.5g/l do not interfere with the assay up to the given levels**.**

NOTES

- Use only plastic material.
- Solution 1 contains sodium azide, avoid ingestion or contact with skin.

PRESENTATION

4 X 60 ml Cat No 2501 240 Tests

BIBLIOGRAPHY

Pesce A.J. and Kaplan L..Methods in Clinical Chemistry, p.1021. The C.V. Morby Company, 1987.

Baginsky E.S., Marie S.S., Karcher R.E. and Zale B. In selected methods of Clinical Chemistry, vol. 9, p. 277, Amer. Assn. For Clin. Chem. Washington D.C., 1982.

Young D.S., Pestaner L.S and Gibberman V. Clin. Chem. 21, No. 5, 197 A5.

The following symbols are used on labels

IVD — **For in vitro diagnostic use**

Use day (last day of the month)

Temperature limitation

LOT — **Batch code**

REF — **Code**