

AGD CliniPak MAGNESIUM (XYLIDYL BLUE)



Code	Pack Size
AGDSP-MG15	R1: 1X15 mL



INTENDED USE

This kit is intended for in vitro quantitative determination of Magnesium in serum, plasma, cerebrospinal fluid and urine.

CLINICAL SIGNIFICANCE

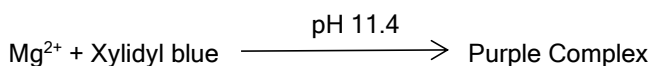
Magnesium is an important mineral for the normal functioning of the nerves, muscles and many other body parts. It is an essential element of the bone structure. It aids in the neutralization of the stomach acids and proper movement of stools through the intestine. Magnesium being an electrolyte helps manage body fluids and balances the electrolyte concentrations.

Low magnesium levels are associated with diabetes, stroke, hereditary heart disease, osteoporosis, high blood pressure, clogged arteries and hyperparathyroidism.

High magnesium levels are associated with renal failure and poor kidney functions.

PRINCIPLE

At alkaline pH magnesium reacts with xylidyl blue and produces a chelating Purple coloured complex. The intensity of the colour is directly proportional to the concentration of magnesium present in the sample.



WORKING REAGENT

Reagents are ready to use.

REAGENT COMPOSITION

REAGENT

Tris Buffer pH 11.0	≈ 200 mmol/L
GEDTA	≈ 60 μmol/L
Xylidyl Blue	≈ 110 mmol/L

STANDARD

Magnesium Standard	2.5 mg/dL
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REAGENT PREPARATION, STORAGE & STABILITY

STABILITY: up to expiration date on labels at 2-8°C.

REAGENT DETERIORATION:

Turbidity or precipitation in any kit or change in colour of the reagent component indicates deterioration and the component must be discarded. Reagent blank absorbance value should be below 0.1 Abs.

SPECIMEN COLLECTION AND HANDLING

Unheamolytic serum, plasma (heparin), CSF and urine samples can be used.

EDTA plasma should not be used.

It is recommended to follow NCCLS procedures (or similar standardized conditions).

Stability of serum/plasma:

7 days at 20-25°C

7 days at 4-8°C

1 year at -20°C

Stability of urine:

3 days at 20-25°C

3 days at 4-8°C

1 year at -20°C

Do not use hemolysed or grossly contaminated samples.

Urine to be acidified with conc. HCl to pH 3-4. Then it is to be diluted with distilled water (1+4). The result must be multiplied by 5.

QUALITY CONTROL

Randox controls Normal and Pathological levels are recommended for establishing instrument performance.

NORMAL RANGE

Serum : 1.9 - 2.5 mg/dL (1.6 - 2.0 mEq/L)

CSF : 2.4 - 3.1 mg/dL (1.9 - 2.5 mEq/L)

Urine : 75 - 125 mg/24h (60 -100 mEq/L)

LINEARITY:

5.00 mg/dl

BASIC PARAMETERS

Short Name	MG
Name	Magnesium
Method	End Point
Reagent Blank	Reagent
Main Wave	505 nm
Sub Wave	0
Decimal	2
Unit	Mg/dL
R1 Volume	300 µL
R2 Volume	0
Sample Volume	3 µL
Assistant Start	NONE
Assistant End	NONE
Test Point- Start	33 (Point)
Test Point - End	38 (Point)
Difference Of absorbance	0
Linearity	5 mg/dL

ASSAY PROCEDURE

Wavelength :505 nm
 Cuvette :1cm light path
 Measure against reagent blank.
 Pipette into clean & dry test tubes.

Mix and incubate for 5 mins. at R.T and read the absorbance (A)

NOTE: - Application for Fully automatic instruments are available on request.

	Blank	Standard	Test
Reagent	300 µL	300 µL	300 µL
standard	----	3 µL	----
Sample	----	----	3 µL










WARNINGS AND PRECAUTIONS

1. Reagent may contain some Non-reactive and preservative components. It is recommended to handle carefully, avoiding contact with skin and ingestion.
2. Specimens should be considered infectious and handled appropriately.
3. Perform the test according to the general "Good Laboratory Practice" (GLP) guidelines.
4. Waste management : Please refer to disposal guidelines as per local authority.

REFERENCES

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5. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. Burtis, C.A., Ashwood, E.R., Bruns, D.E.; 5th edition, WB Saunders Comp., 2012.
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SYMBOLS

Sr. No.	Symbol	Instruction
1		Trademark of AGD Biomedicals P Ltd
2	 Caution	Note : Misoperation may result in injury to the user or property loss.
3		Manufacturer
4		Date of Manufacture
5		Consult Instructions for Use
6		Unique Device Identification
7		Limit of Temperature
8		Catalogue Number
9		Authorized representative in the European community



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