



Magnesium XL FS*

In-vitro-Diagnostic for veterinary use only

Diagnostic reagent for quantitative in vitro determination of magnesium in serum or plasma on DiaSys respons[®] 910 VET

Order Information

Cat. No. 1 4610 99 11 921
4 containers for 120 tests each

Method

Photometric test using xylydyl blue

Principle

Magnesium ions form a purple colored complex with xylydyl blue in alkaline solution. In presence of GEDTA, which complexes calcium ions, the reaction is specific. The intensity of the purple color is proportional to the magnesium concentration.

Reagents

Components and Concentrations

Ethanolamine	pH 11.0	750 mmol/L
GEDTA (Glycoetherdiamine tetraacetic acid)		60 µmol/L
Xylydyl blue		110 µmol/L
Detergents		

Storage Instructions and Reagent Stability

The reagent is stable up to the end of the indicated month of expiry, if stored at 35.6 – 46.4°F and contamination is avoided. Do not freeze the reagent!

Warnings and Precautions

- Reagent 1 Danger. H315 Causes skin irritation. H318 Causes serious eye damage. P264 Wash hands and face thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a poison center or doctor/physician.
- In very rare cases, samples of animals with gammopathy might give falsified results.
- Please refer to the safety data sheets and take the necessary precautions for the use of laboratory reagents. For diagnostic purposes, the results should always be assessed with the animal's medical history, clinical examinations and other findings.
- For professional use only!

Waste Management

Please refer to local legal requirements.

Reagent Preparation

The reagent is ready to use. The bottles are placed directly onto the reagent rotor.

Specimen

Serum or plasma (do not use EDTA plasma!)

Stability :
2 days at 39.2°F to 46.4°F

Discard contaminated specimens.

Calibrators and Controls

For calibration, DiaSys TruCal U calibrator is recommended. The assigned values of the calibrator have been made traceable to the reference method Atomic Absorption Spectrometry (AAS). For internal quality control DiaSys TruLab N and P controls should be assayed. Each laboratory should establish corrective action in case of deviations in control recovery.

	Cat. No.	Kit size
TruCal U	5 9100 99 11 063	20 x 3 mL
TruLab N	5 9000 99 11 062	20 x 5 mL
TruLab P	5 9050 99 11 062	20 x 5 mL

Performance Characteristics

The performance characteristics were evaluated with human samples and might differ from results obtained with various animal specimen.

Measuring range up to 5 mg/dL magnesium (in case of higher concentrations re-measure samples after manual dilution with NaCl solution (9 g/L) or use rerun function).	
Limit of detection**	0.2 mg/dL magnesium
On-board stability	10 days
Calibration stability	7 days

Interfering substance	Interferences < 10%	Magnesium [mg/dL]
Ascorbate	up to 30 mg/dL	3.39
Hemoglobin	up to 250 mg/dL	1.90
	up to 250 mg/dL	2.90
Bilirubin, conjugated	up to 50 mg/dL	2.04
	up to 50 mg/dL	2.91
Bilirubin, unconjugated	up to 60 mg/dL	2.08
	up to 60 mg/dL	2.99
Lipemia (triglycerides)	up to 1300 mg/dL	1.99
	up to 1800 mg/dL	2.78
Calcium	up to 20 mg/dL	2.08

Hemolysis interferes because Magnesium is released by erythrocytes.

For further information on interfering substances refer to Young DS. Effects of Drugs on Clinical Laboratory Tests. 5th. ed. Volume 1 and 2. Washington, DC: The American Association for Clinical Chemistry Press, 2000.

** according to NCCLS document EP17-A, vol. 24, no. 34

Conversion Factor

Magnesium [mg/dL] x 0.4114 = Magnesium [mmol/L]

Reference Range

DOG	CAT	HORSE	CATTLE	Unit
1.6 – 2.3	1.7 – 2.7	1.7 – 2.3 *	2.0 – 3.1	mg/dL

Source:

Reference ranges have been validated by DiaSys USA according to National Reference Laboratory standards.

* Estimated:

Source: Diagnostic Center for Population and Animal Health; Clinical Pathology Laboratory; Michigan State University East Lansing.

Each laboratory should check if the reference ranges are transferable to its own animal population and determine own reference ranges if necessary.

Manufacturer

DiaSys Diagnostic Systems GmbH
Alte Strasse 9 65558 Holzheim Germany