respons®910 VET

Uric acid FS* TOOS

In-vitro-Diagnostic for veterinary use only

Diagnostic reagent for quantitative in vitro determination of uric acid in serum or plasma on DiaSys respons®910 VET

Order Information

Cat. No. 1 3001 99 11 920
4 twin containers for 200 tests each

Method

Enzymatic photometric test using TOOS (N-ethyl-N-(hydroxy-3-sulfopropyl)-m-toluidin)

Principle

Uric acid is oxidized to allantoin by uricase. The generated hydrogen peroxide reacts with 4-aminoantipyrine and N-ethyl-N-(hydroxy-3-sulfopropyl)-m-toluidin (TOOS) to a blue violet dye. Ascorbate oxidase avoids interference by ascorbic acid and other reducing substances.

$$\text{Uric acid} + H_2O + O_2 \xrightarrow{\text{Uricase}} \text{Allantoin} + CO_2 + H_2O_2$$

$$\text{TOOS} + \text{4-Aminoantipyrine} + 2\,H_2O_2 \xrightarrow{\text{POD}} \text{Indamine} + 3\,H_2O$$

Reagents

Components and Concentrations

R1:	Phosphate buffer	pH 7.0	100 mmol/L
	TOOS		1.25 mmol/L
	Ascorbate oxidase		≥ 1.2 kU/L
R2:	Phosphate buffer	pH 7.0	100 mmol/L
	4-Aminoantipyrine		1.5 mmol/L
	$K_4[Fe(CN)_6]$		50 µmol/L
	Peroxidase (POD)		≥ 5 kU/L
	Uricase		≥ 250 U/L

Storage Instructions and Reagent Stability

The reagents are stable up to the end of the indicated month of expiry, if stored at 35.6 – 46.4°F, protected from light and contamination is avoided. DiaSys respons containers provide protection from light. Do not freeze the reagents!

Warnings and Precautions

1. The reagents contain sodium azide (0.95 g/L) as preservative. Do not swallow! Avoid contact with skin and mucous membranes.
2. The reagents contain animal material. Handle the product as potentially infectious according to universal precautions and good laboratory practice.
3. In very rare cases, samples of animals with gammopathy might give falsified results.
4. N-acetylcysteine (NAC), acetaminophen and metamizole medication leads to falsely low results.
5. 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.
6. For professional use only!

Waste Management

Please refer to local legal requirements.

Reagent Preparation

The reagents are ready to use. The bottles are placed directly into the reagent rotor.

Specimen

Serum, heparin plasma or 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. This method has been standardized against the reference method GC-IDMS gas chromatography-isotope dilution mass spectrometry (GC-IDMS). 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 20 mg/dL uric acid (in case of higher concentrations re-measure samples after manual dilution with NaCl solution (9 g/L) or use rerun function).	
Limit of detection**	0.1 mg/dL uric acid
On-board stability	6 weeks
Calibration stability	3 weeks

Interfering substance	Interferences < 10%	Uric acid [mg/dL]
Ascorbate	up to 30 mg/dL	7.95
Hemoglobin	up to 65 mg/dL	3.30
	up to 65 mg/dL	9.22
Bilirubin, conjugated	up to 25 mg/dL	3.55
	up to 25 mg/dL	7.94
Bilirubin, unconjugated	up to 23 mg/dL	3.66
	up to 23 mg/dL	7.95
Lipemia (triglycerides)	up to 2200 mg/dL	3.26
	up to 2200 mg/dL	8.40
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:

Uric acid [mg/dL] x 59.48 = Uric acid [µmol/L]

Reference Range

Each laboratory should determine own reference ranges for its individual animal population.

Manufacturer

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