



URIC ACID KIT

(Uricase / PAP Method)

(For veterinary invitro diagnostic use only)

INTENDED USE

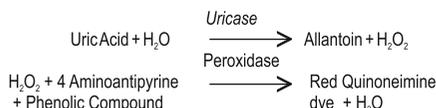
QUADRAPED™ Uric Acid kit is used for the determination of Uric Acid in serum or plasma.

SUMMARY

Uric acid is the end product of the purine metabolism. Uric acid is excreted to a large degree by the kidneys and to smaller degree in the intestinal tract by microbial degradation. Increased levels are found in Gout, arthritis, impaired renal functions, and starvation. Decreased levels are found in Wilson's disease, Fanconis syndrome and yellow atrophy of the liver.

PRINCIPLE

Uricase converts uric acid to allantoin and hydrogen peroxide. The hydrogen peroxide formed further reacts with a phenolic compound and 4 aminoantipyrine by the catalytic action of peroxidase to form a red coloured quinoneimine dye complex. Intensity of the colour formed is directly proportional to the amount of uric acid present in the sample.



EXPECTED VALUES

Species	Uric Acid (mg/dl)
Dog	0.5-5.5
Cat	0.2-1.0
Cow	0.2-1.0
Horse	0.2-0.8
Pig	0.6-1.5
Sheep	0.2-1.0
Goat	0.2-1.0
Rabbit	0.5-1.5
Buffalo	0.5-1.5

It is recommended that each laboratory establish its own range as reference ranges may vary between laboratories.

PRESENTATION

REF	
1126230025	
Pack Size	25 ml
L1 Buffer Reagent	20 ml
L2 Enzyme Reagent	5 ml
S Uric Acid Standard (8 mg/dl)	5 ml

COMPOSITION

Phosphate Buffer 100mM; Uricase 100U; POD1000U; 4-AAP 0.6mM; TBHA 1.0mM; Uric Acid 80mg; Non Reactive Stabilizers, Detergents and Preservatives.

STORAGE / STABILITY

Contents are stable at 2-8°C till the expiry mentioned on the labels.

REAGENT PREPARATION

Reagents are ready to use.

Working reagent: Pour the contents of 1 bottle of L2 (Enzyme Reagent) into 1 bottle of L1 (Buffer Reagent). This working reagent is stable for at least 4 weeks when stored at 2-8°C. Upon storage the working reagent may develop a slight pink colour however this does not affect the performance of the reagent.

Alternatively for flexibility as much of working reagent may be made as and when desired by mixing together 4 parts of L1 (Buffer Reagent) and 1 part of L2 (Enzyme Reagent). Alternatively 0.8 ml of L1 and 0.2 ml of L2 may also be used instead of 1 ml of the working reagent directly during the assay.

SAMPLE MATERIAL

Serum, plasma. Uric Acid is reported to be stable in the serum/plasma for 3-5 days when stored at 2-8°C.

SAMPLE WASTE AND DISPOSAL

Do not reuse the reagent containers, bottles, caps or plugs due to the risks of contamination and the potential to compromise reagent performance.

Appropriate biosafety practices should be used for materials that contain or are suspected of containing infectious agents.

Handle specimens, solid and liquid waste and test components in accordance with local regulations and NCCLS guidelines M29, or other published biohazard safety guidelines.

MATERIALS REQUIRED BUT NOT PROVIDED

Photometer analyzer with standard thermostatic cuvette holder, micropipette and appropriate laboratory equipment.

PROCEDURE

Wavelength / filter : 520 nm (Hg 546 nm) / Yellow Green
Temperature : 37°C / R.T.
Light path : 1 cm

Pipette into clean dry test tubes labelled as Blank (B), Standard (S) and Test (T):

Addition Sequence	B (ml)	S (ml)	T (ml)
Working Reagent	1.0	1.0	1.0
Distilled Water	0.02	-	-
Uric Acid Standard (S)	-	0.02	-
Sample	-	-	0.02

Mix well and incubate at 37°C for 5 min. or at R.T. (25°C) for 15 mins. Measure the absorbance of the Standard (Abs. S), and Test Sample (Abs. T) against the Blank, within 30 mins.

CALCULATIONS

$$\text{Uric Acid in mg/dl} = \frac{\text{Abs. T}}{\text{Abs. S}} \times 8$$

QUALITY CONTROL

The following process is recommended for QC during the assay of

Uric Acid. *Define and establish acceptable range for your laboratory.

- Two levels of control (Normal and Abnormal) are to be run on a daily basis.
- If QC results fall outside acceptance criteria, recalibration may be necessary.
- Review QC results and run acceptance criteria following a change of reagent lot.

SPECIFIC PERFORMANCE CHARACTERISTICS

LOD : 0.15 mg/dl

LOQ : 1.0 mg/dl

Lower Limit : 0.15 mg/dl

Higher Limit : 20 mg/dl

If values exceed this limit, dilute the serum with normal saline (NaCl 0.9%) and repeat the assay. Calculate the value using the proper dilution factor.

Interferences:

Sample when spiked with interferent such as upto 10 mg/dl Bilirubin, 2000 mg/dl intralipid and 50 mg/dl Haemoglobin does not affect the ability of the kit to determine the uric acid concentration.

Precision:

Within run

Within run	n	Mean	SD	% CV
Sample 1	10	6.34	0.03	0.46
Sample 2	10	9.72	0.02	0.16
Sample 3	10	6.52	0.01	0.16

Between run

Between run	n	Mean	SD	% CV
Sample 1	10	6.35	0.03	0.46
Sample 2	10	9.93	0.02	0.22
Sample 3	10	6.52	0.01	0.16

Method comparison:

Comparative studies were done to compare our reagent with another commercial Uric Acid Assay. No significant differences were observed. Details of the comparative studies are available on request.

NOTE

In vitro diagnostic reagent for laboratory and professional use only Not for medicinal use. The reagent contain sodium azide 0.1% as preservative. Avoid contact with skin and mucosa. On disposal flush with large quantities of water. Only clean and dry glassware must be used. Do not use turbid, deteriorated or leaking reagents.

REFERENCES

- Trinder P., (1969) Ann. Clin. Biochem. 6:24.
- Fossati P., Prencipe L., (1980) Clin. Chem. 26 : 227.
- Clinical Chemistry, Principles, Procedures, Correlations, Michael L. Bishop, et.al., 5th Edition.
- Duncan and Prasse's Veterinary Laboratory Medicine: Clinical Pathology, Kenneth S. Latimer, ISBN Jane Wardrop , 6th Edition – 2010.
- Clinical Biochemistry of Domestic Animals, Sixth Edition, 2008 by Kaneko J.J., Harvey J.W. & Bruss M.L.
- Data on file: Coral Clinical Systems.

System Parameters

Reaction	: End Point	Interval	: —
Wavelength	: 520 nm	Sample Vol.	: 0.02 ml
Zero Setting	: Reagent Blank	Reagent Vol.	: 1.00 ml
Incub. Temp.	: 37°C / R. T.	Standard	: 8 mg/dl
Incub. Time	: 5 min. / 15 min.	Factor	: —
Delay Time	: —	React. Slope	: Increasing
Read Time	: —	Linearity	: 20 mg/dl
No. of read.	: —	Units	: mg/dl

SYMBOL KEYS

Store at 2-8°C	Manufacturer	IVD In vitro Diagnostic Medical Device	L1 Buffer Reagent	Uricase / PAP Uricase / PAP Method
Use by (Last day of stated month)	Consult instructions for use	LOT Batch Number	L2 Enzyme Reagent	S Uric Acid Standard (8 mg/dl)
Date of Manufacture	REF Catalogue Number			This way up



Manufactured by:

Coral Clinical Systems

A Division of Tulip Diagnostics (P) Ltd.

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