

URIC ACID

Colorimetric/Uricase – PAP Method

PRODUCT CODE

CS018

INTENDED USE

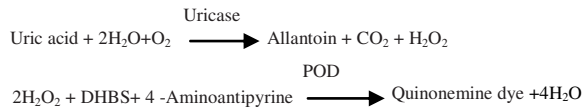
This reagent is intended for in vitro quantitative determination of Uric acid in serum & plasma

CLINICAL SIGNIFICANCE

Uric acid measurements are used in the diagnosis and treatment of numerous renal and metabolic disorders, including renal failure, gout, leukemia, psoriasis, starvation or other wasting conditions, and of patients receiving cytotoxic drugs.

PRINCIPLE

Uric Acid is the end product of purine metabolism. Its quantitation aids in the diagnosis of gout, renal dysfunction, diabetes and other condition, Uricase catalyze the oxidation of uric acid to Allantoin and H₂O₂. In the presence of Peroxidase (POD), H₂O₂ reacts with 4-Aminoantipyrine and 3, 5, Dichloro-2-Hydroxybenzulsulphonate (DHBS) to form Quinonemine dye, the concentration of which at 546 nm is directly proportional to the Uric Acid concentration.



REAGENT COMPOSITION

Uric Acid Reagent

Phosphate Buffer (pH7.5)	50 mmol/L
4-Aminoantipyrine	0.3 mmol/L
DHBS	4.0 mmol/L
Uricase	400 U/L
Peroxidase	100 KU/L

Uric Acid Standard

Uric Acid standard concentration 8 mg/dL or 476 μmol/L

REAGENT PREPARATION

Reagent and standard are ready for use.

REAGENT STORAGE AND STABILITY

The reagents are stable, if protected from light, up to the stated expiry date when stored at 2 - 8° C.

SPECIMEN

Fresh serum, heparinized or EDTA plasma may be used

PRECAUTION

To avoid contamination, use clean laboratory wares. Avoid direct exposure of reagent to light.

ASSAY

Wavelength	546nm
Cuvette	1 cm light path
Temperature	20-25°C or 37°C
Measurement	Against reagent blank

PROCEDURE

Pipette into Cuvettes	Blank	Standard	Sample
Uric acid reagent	1000 μL	1000 μL	1000 μL
Standard	--	20 μL	--
Sample	--	--	20 μL

Mix and incubate for 10 minutes at 20-25°C or 5 minutes at 37°C Measure the absorbance of the sample (As) and the standard (Astd) against the reagent blank immediately.

CALCULATION

$$\text{Uric acid Conc. (mg/dL)} = \frac{\Delta A \text{ sample}}{\Delta A \text{ standard}} \times 8 \text{ (Std.conc.)}$$

To convert mg/dL to μmol/L multiply by 59.60

LINEARITY

This reagent is linear up to 20 mg/dL or 1192 μmol/L. If the concentration is greater than linearity (20 mg/dL), dilute the sample 1:1 with normal saline (0.9%) and multiply the result by 2.

NORMAL RANGE

Males	3.4 – 7.0 mg/dL	203 - 417 μmol/L
Females	2.4 – 5.7 mg/dL	143 - 340 μmol/L















QUALITY CONTROL

All control sera with Uric acid value estimated by this method can be used.

NOTES

- Grossly lipaemic or haemolysed samples can cause falsely high uric acid values. Bilirubin or ascorbic acid, at high levels may result in negative interference.

SYMBOL ON LABELS

Symbols	Signify	Symbols	Signify
	Catalogue Number		Pack Size
	Expiry Date		Volume
	Storage Condition		Lot Number
	Instruction for Use		In Vitro Diagnostics
	Manufacturing Date		Manufacturer
	Number of Tests		For Single Use Only
	EC Representative		European conformity

BIBLIOGRAPHY

- Trivedi, R et al;clin;chem 22,1223, 1976
- Kabasakalian,P.et al;clin Chem, 19,522, 1973
- Trinder,p.J;Clin.Pathol. 22.246.1949
- Fossati,p.et al; clin chem.26,227,1980.