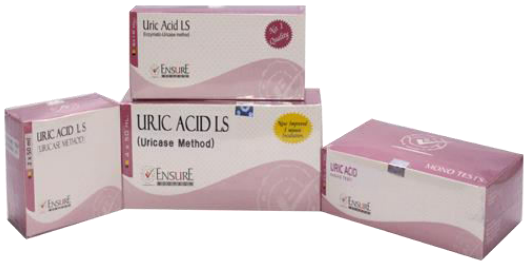
UREA ACID LS



PRINCIPLE

The substrate Uric Acid is converted into Allantoin and Hydrogen peroxide by the action of Uricase Chromogen, 4-Aaminoantipyn‘ne and phenolic compound combined with Hydrogen Peroxide in presence of Peroxidase gives final colored complex. The intensity of color corresponds to Uric Acid concentration and is measured at 505nm orwim green filter.

Uric Acid + 0_2 + H_20 → Allantion + CO_2 +H_20_2

H_20_2 + 4 Aminontipyrine + Phenolic Compound → Colored Complex

CLINICAL SIGNIFICANCE

Uric Acid is main end product of Nucleic Acid and Purine metabolism. Elevated levels are seen in clinical conditions like Gout and Renal failure. Acute infectious diseases like severe Uremia, Toxemia of pregnancy and Leukemia also causes increase in Uric Acid levels. Low level of Uric Acid is seen in renal tubularsyndrome.

SAMPLE COLLECTION AND STORAGE

- ✓ Fresh fasting, un-hemolysed serum sample is preferred.
  Plasma collected with Heparin or EDTA as anti-coagulant may be used.
- ✓ Samples are stable for? days when stored at2-8°C.
- ✓ Urine sample collected for 24 hours period using 5% Sodium Hydroxide as preservative should be diluted 10 times using distilled water before Uric Acid determination

PRECAUTIONS

- ➢ **Uric Acid LS** kit is for in Vitro diagnostic use only
- ➢ Bring all reagents to Room Temperature

KIT CONTENTS & STORAGE

Enzyme Reagent	25 x 1 ml	5 x 10 ml	2 x 50 ml	4 x 50 ml
Standard	1x1ml	1x1ml	1x1ml	1x2ml

All reagents are to be stored at 2-8 °C and stable till expiry date mentioned on the table.

REAG ENT PREPARATI ON

All reagents are Ready to use.

SYSTEM PARAM ETERS

Reaction Type	:	End Point with standard
Slope of Reaction	:	Increasing
Reagent Volume	:	1.0 ml
Sample Volume	:	20 µl
Standard Concentration	:	10 mg/dl
Incubation Time	:	5minutes
Wavelength	:	546nm
Flow cell temp	:	370
Units	:	mg/dl
Zero Setting	:	Reagent blank

PROCEDURE:

Pipette in a clean dry test tubes labeled Blank (B), Standard(S) and Test(T)

EnzymeReagent	1.0 ml	1.0 ml	1.0 ml
Standard		20 µl	
Sample			20 µl

Mix well and keep at 37°C for 5 minutes or at 10 minutes at RT. Measure the absorbance of Test (T) and Standard(S) against reagent blank on photometer using Green filter or on a spectrophotometer at 546nm

CALCULATIONS

Conc o Uric Acid in Serum (mg/dl) = (Abs of Test /Abs of Standard) X Conc of Standard

Cone of Uric Acid in Urine (mg/dl) = (Abs of Test /Abs of Standard) X Conc of Dil Factor

LINEARITY

This method is linear up to 25 mg/dl. For sample with higher values than 25 mg/dl, dilute the sample using normal saline and repeat the assay.
Apply proper dilution factor while calculation.

NORMAL RANGE

	Serum	Urine
Male	4.0-7.2 mg/dl	250-750 mg/24 hrs
Female	2.7-6.5mg/dl/24hrs	

Due to variation in inter-laboratory assay conditions, instruments and demography, it is recommended that each laboratory should establish its own normal range.

Bibliography

1. Barham, D, & Trinder P,Analyst 97 (1972)142- 45.
2. Trivedi R.C. Reber, L. Berka , E, And Strong 1.Clin. chem 25(2) 336 (1979)