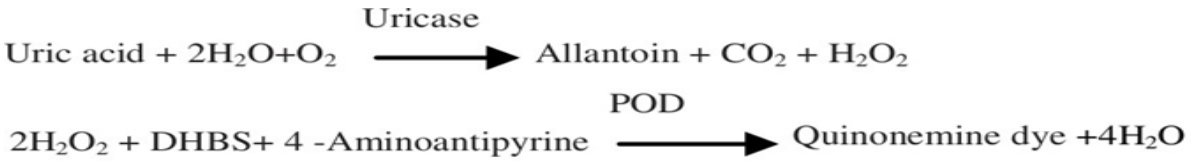
Estimation of uric acid

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 4Aminoantipyrine and 3, 5, Dichloro-2-Hydroxybenzensulphonate (DHBS) to from 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