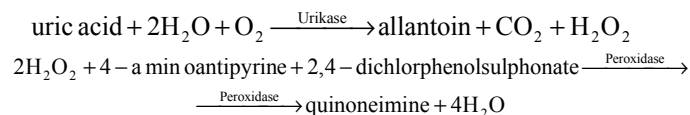


PRINCIPLE:

Uric acid is converted by uricase to allantoin and H₂O₂, which under the catalytic influence of peroxidase, oxidizes 2,4-dichlorophenolsulphonate and 4-amino-antipyrine to form a red-violet quinoneimine. The intensity of the colour formed is proportional to the concentration of uric acid.



SAMPLE:

Serum, plasma or urine .Urine diluted 1:10 with distilled water.
Stable for 5 days at +2 °C to +8 °C.

REAGENTS:

- | | | |
|----------------------|--|-----------|
| 1. Reagent | | |
| Pipes buffer, pH 7.0 | | 50 mmol/L |
| ADPS | | 4 mmol/L |
| Uricase | | 160 U/L |
| Peroxidase (POD) | | 8600 U/L |
| Ascorbate Oxidase | | 1200 U/L |
| 4-aminophenazone | | 1 mmol/L |
| 2. Standard | | |
| Uric acid | Standard concentration see on the vial label | |

Store at +2 °C to +8 °C.

PREPARATION OF REAGENTS:

Liquid reagent, ready to use.
This reagent is stable up to the date of expiration at +2 °C to +8 °C.
Avoid direct sunlight.

PROCEDURE:

- | | |
|--------------|-----------------------|
| Wavelength: | 546 nm (520 - 560 nm) |
| Cuvette: | 1 cm light path |
| Temperature: | 20 °C, 25 °C, 37 °C |
| Zero: | reagent blank |

Pipette into test tubes	Reagent blank	Standard	Sample
Standard	-	25 µl	-
Sample	-	-	25 µl
Working reagent	1000 µl	1000 µl	1000 µl
Mix and incubate for 10 min. at room temperature or 5 min. at 37 °C. Avoid exposure to direct sunlight. Measure the absorbance of the standard and sample against the reagent blank within 30 minutes.			

CALCULATION:

$$\frac{A_{\text{sample}}}{A_{\text{standard}}} \times \text{stand.conc.} = \text{Uric acid conc.}$$

EXPECTED VALUES:

Serum	Women	148- 357 µmol/l (2.5 - 6.0 mg/dl)
	Men	202 - 416 µmol/l (3.4 - 7.0 mg/dl)
Urine	1.5 - 4.5 µmol/24h (250 - 750 mg/24h)	

LINEARITY:

up to 1487 µmol/l (25 mg/dl)

QUALITY CONTROL:

- | | | |
|----------|-----------|-------------------|
| CONTRO-N | 20 x 5 ml | Cat. No. 101-0083 |
| CONTRO-P | 20 x 5 ml | Cat. No. 101-0084 |

NOTE:

- If the uric acid concentration >1487 µmol/l, dilute sample 1:2 with physiological solution and repeat the assay (result x 2).
- If urine sample is turbid, warm up to about 60 °C for 10 minute to dissolve the uric acid.
- In presence of hiperlipemic or hemolized sample a blank with saline solution is recommended.
- Reagents contain sodium azide as stabilizer. Do not swallow. Avoid contact with the skin and mucous membrane.

REFERENCES

- Barham and Trinder Analyst 97, 142 (1972)
- Fossatti and Prencipe. Clin Chem 28,227 (1980)