## Quantitative Determination of Uric Acid IVD

### Order Information

<table>
<thead>
<tr>
<th>REF:</th>
<th>Cont.</th>
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</thead>
<tbody>
<tr>
<td>URISLR 25</td>
<td>1x25 ml</td>
</tr>
<tr>
<td>URISLR 125</td>
<td>5x25 ml</td>
</tr>
<tr>
<td>URISLR 200</td>
<td>4x50 ml</td>
</tr>
<tr>
<td>URISLM 25</td>
<td>25x1 ml</td>
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### Clinical Significance

Uric acid and its salts are end products of the purine metabolism. With progressive renal insufficiency, there is retention in blood of urea, creatinine and uric acid. Elevate uric acid level may be indicative of renal insufficiency and is commonly associated with gout1,5,6. Clinical diagnosis should not be made on a single test result; it should integrate clinical and other laboratory data.

### Principle

Uric acid is converted by uricase to allantoin and hydrogen peroxide, which under the catalytic influence of peroxidase, oxidises 3, 5 - dichloro - 2 - hydroxybenzenesulfonic acid and 4-aminophenazone to form a red-violet quinoneimine compound.

### Reagent Composition

- **Reagent I**: Enzyme reagent
- **Uric Acid Standard**: 5 mg/dl

### Safety Precautions and Warnings

1. This reagent is for *in vitro* diagnostic use only.
2. Reagent contains Sodium Azide (0.05%) as a preservative. In a dry state may react with copper or lead plumbing to form explosive metal azides. Upon disposal, flush with large amounts of water to prevent azide build up.

### Sample Collection and Preservation

Serum, heparinised plasma or EDTA plasma, urine.

Dilute urine 1:10 with distilled water. Multiply the result by 10.

Stability: 5 days at 4 - 25°C

### Reagent Preparation and Storage

The reagent is ready to use.

### Reagent Stability

The reagent is stable till expiry when stored at 2 - 8°C (Store protected from light)

### Linearity

This method is linear upto a concentration of 25 mg/dl.

Dilute samples above this concentration 1:1 with 0.9% saline and reassay. Multiply the result by 2.

### Automated Parameters

- **Wavelength**: 520 nm
- **Cuvette**: 1 cm light path
- **Reaction Temperature**: 37°C
- **Measurement**: Against r
- **Reaction Type**: End Point
- **Sample/Reagent Ratio**: 1:40
- **Incubation**: 10 minutes
- **Maximum Blank Absorbance**: 0.30
- **Low Normal at 37°C**: 2.4 mg/dl
- **High Normal at 37°C**: 7.0 mg/dl
- **Linearity at 37°C**: 25 mg/dl

### Assay Procedure

**PIPETTE INTO TEST TUBES**

<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>BLANK</th>
<th>STD</th>
<th>SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 μl</td>
<td>-</td>
<td>25 μl</td>
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Mix well, incubate for 10 mins at 37°C (or 15 mins at 20-25°C). Measure absorbance of sample (Ac) and standard (As) against reagent blank. The color is stable for 60 mins at 20-25°C.

### Calculation

\[
\frac{Ac}{As} \times C. = \text{mg/dl Uric Acid Serum or plasma}
\]

\[
\frac{Ac}{As} \times C \times 10 = \text{mg/dl Uric Acid Urine}
\]

C= Concentration of standard

### Quality Control

Accutestrol N - H

### Reference Interval

- **Serum**
  - Men: 3.4-7.0 mg/dl
  - Women: 2.4-5.7 mg/dl
- **Urine**: 250-750 mg/24h

### Bibliography

Caraway, W.T., Clin Chem.4, 239(1963),
