Overview

Useful For
Assessment of iodine toxicity or recent exposure when a 24-hour urine cannot be collected
Monitoring iodine excretion rate as index of replacement therapy when a 24-hour urine cannot be collected

Profile Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICR</td>
<td>Iodine/Creat Ratio, U</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>CDCR</td>
<td>Creatinine Conc</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Special Instructions
- [Trace Metals Analysis Specimen Collection and Transport](#)

Method Name
ICR: Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

CDCR: Enzymatic Colorimetric Assay

NY State Available
Yes

Specimen

Specimen Type
Urine

Advisory Information
Due to the significant variation in the rate of secretion over the course of a day, a 24-hour collection is preferred. For more information see UIOD / Iodine, 24 Hour, Urine.

Specimen Required

Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours.

Supplies: Urine Tubes, 10 mL (T068)

Collection Container/Tube: Clean, plastic urine collection container

Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert

Specimen Volume: 3 mL
Collection Instructions:

1. Collect a random urine specimen.

2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume

1 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
<tr>
<td>Urine</td>
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<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>30 days</td>
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Clinical and Interpretive

Clinical Information

Iodine is an essential element for thyroid hormone production.

The measurement of urinary iodine serves as an index of adequate dietary iodine intake.

Reference Values

0-17 years: not established

> or = 18 years: <584 mcg/g creatinine

Interpretation

Measurement of urinary iodine excretion provides the best index of dietary iodine intake and deficiency is generally indicated when the concentrations are below 100 mcg/L. For deficiency, 10 repeat random urines are recommended.

Cautions

Administration of iodine-based contrast media and drugs containing iodine, such as amiodarone, will yield elevated results.

Clinical Reference


### Performance

#### Method Description

Iodine in urine is analyzed by inductively coupled plasma-mass spectrometry (ICP-MS) in standard mode using tellurium (Te), as an internal standard, and an aqueous acidic calibration.(Unpublished Mayo method)

Creatinine is measured using an enzymatic method based on the determination of sarcosine from creatinine with the aid of creatininase, creatinase, and sarcosine oxidase. The liberated hydrogen peroxide is measured via a modified Trinder reaction using a colorimetric indicator.(Package insert: Roche Diagnostics, Indianapolis IN, 2018)

#### PDF Report

No

#### Day(s) and Time(s) Test Performed

Monday, Thursday; Continuously

#### Analytic Time

1 day

#### Maximum Laboratory Time

3 days

#### Specimen Retention Time

14 days

#### Performing Laboratory Location

Rochester

### Fees and Codes

#### Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

#### Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

#### CPT Code Information

83789

82570
## LOINC® Information

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<td>ICRU</td>
<td>Iodine/Creat Ratio, Random, U</td>
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