Overview

Useful For
Detecting mercury toxicity using random urine specimens

Special Instructions
- Trace Metals Analysis Specimen Collection and Transport

Method Name
Only orderable as part of profile. For more information see:

HGUCR / Mercury/Creatinine Ratio, Random, Urine

HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random Urine.

Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

NY State Available
Yes

Specimen

Specimen Type
Urine

Specimen Required
Only orderable as part of profile. For more information see:

HGUCR / Mercury/Creatinine Ratio, Random, Urine

HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random Urine.

Specimen Minimum Volume
1.5 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>
</tr>
</thead>
<tbody>
<tr>
<td>Urine</td>
<td>Refrigerated (preferred)</td>
<td>7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>7 days</td>
<td></td>
</tr>
</tbody>
</table>

Clinical and Interpretive
Clinical Information

The correlation between the levels of mercury (Hg) excretion in the urine and the clinical symptoms is considered poor.

It had always been thought that urine was a more appropriate marker of inorganic mercury, because organic mercury represented only a small fraction of urinary mercury. Based on possible demethylation of methylmercury within the body, urine may represent a mixture of dietary methylmercury and inorganic mercury. Seafood consumption can contribute to urinary mercury levels (up to 30%), (1) which is consistent with the suggestion that due to demethylation processes in the human body, a certain proportion of urinary mercury can originate from dietary consumption of fish/seafood. (2).

For additional information, see HG / Mercury, Blood.

Reference Values

Only orderable as part of profile. For more information see:

HGUCR / Mercury/Creatinine Ratio, Random, Urine

HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random Urine.

Interpretation

Daily urine excretion of mercury above 50 mcg/day indicates significant exposure (per World Health Organization standard).

Cautions

To avoid contamination by dust, specimen should be collected away from the site of suspected exposure.

Clinical Reference


Performance

Method Description

Mercury (Hg) in urine is analyzed by inductively coupled plasma-mass spectrometry (ICP-MS) in kinetic energy discrimination (KED) mode using gallium (Ga), rhodium (Rh), and iridium (Ir) as internal standards and a 5% nitric acid salt matrix calibration. (Unpublished Mayo method)

PDF Report

No
**Day(s) Performed**
Monday through Friday

**Report Available**
1 day

**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.

**LOINC® Information**

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HGCU</td>
<td>Mercury/Creatinine Ratio, U</td>
<td>13465-0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>608903</td>
<td>Mercury/Creatinine Ratio, U</td>
<td>13465-0</td>
</tr>
</tbody>
</table>