

## Overview

### Useful For

Detecting mercury toxicity due to occupational exposure

### Profile Information

Test ID	Reporting Name	Available Separately	Always Performed
HGOE	Mercury Occupational Exposure	No	Yes
CDCR	Creatinine Conc	No	Yes

### Special Instructions

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

### Method Name

HGOE: Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

CDCR: Enzymatic Colorimetric Assay

### NY State Available

Yes

## Specimen

### Specimen Type

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 container with no metal cap or glued insert

**Submission Container/Tube:** Plastic, 10-mL urine tube (T068) or clean, plastic aliquot container with no metal cap or glued insert

**Specimen Volume:** 3 mL

### Collection Instructions:

1. Collect a random urine specimen.



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2. See [Trace Metals Analysis Specimen Collection and Transport](#) in Special Instructions for complete instructions.

**Specimen Minimum Volume**

1.5 mL

**Reject Due To**

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

**Specimen Stability Information**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

**Clinical and Interpretive****Clinical Information**

The correlation between the levels of mercury (Hg) excretion in the urine and the clinical symptoms is considered poor. However, urinary Hg is the most reliable way to assess exposure to inorganic Hg.

For additional information, see HG / Mercury, Blood.

**Reference Values**

Biological Exposure Index (BEI): <35 mcg/g creatinine prior to shift

**Interpretation**

Daily urine excretion of mercury greater than 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**

1. Lee R, Middleton D, Caldwell K, et al: A review of events that expose children to elemental mercury in the United States. Environ Health Perspect 2009 Jun;117(6):871-878
2. Bjorkman L, Lundekvam BF, Laegreid T, et al: Mercury in human brain, blood, muscle and toenails in relation to exposure: an autopsy study. Environ Health 2007 Oct 11;6:30

**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**

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No

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

Monday through Saturday; 7 p.m.

**Analytic Time**

1 day

**Maximum Laboratory Time**

4 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**

See Individual Test IDs

**CPT Code Information**

83825

82570

**LOINC® Information**

Test ID	Test Order Name	Order LOINC Value
HGUO	Mercury Occupat Exposure, Random, U	13465-0

Result ID	Test Result Name	Result LOINC Value
CDCR	Creatinine Conc	2161-8
48556	Mercury Occupational Exposure	13465-0