

**Overview****Useful For**

Detecting mercury toxicity in random urine specimens

**Special Instructions**

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

**Method Name**

Only orderable as part of profile. See HGRCR / Mercury/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

**NY State Available**

Yes

**Specimen****Specimen Type**

Urine

**Specimen Required**

Only orderable as part of profile. See HGRCR / Mercury/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

**Specimen Minimum Volume**

3 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.

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## Reference Values

Only orderable as part of profile. See HGRCR / Mercury/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, 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

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using gallium (Ga), rhodium (Rh), and iridium (Ir) as internal standards and a 5% nitric acid salt matrix calibration.(Unpublished Mayo method)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

No

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

Monday through Friday; 7 p.m.

### Analytic Time

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

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CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

**LOINC® Information**

Test ID	Test Order Name	Order LOINC Value
HGRC	Mercury/Creatinine Ratio, U	13465-0

Result ID	Test Result Name	Result LOINC Value
48546	Mercury/Creatinine Ratio, U	13465-0