



# Test Definition: HMU24

Heavy Metals Screen, with Reflex, 24 Hour,  
Urine

**Reporting Title:** Heavy Metal Scrn w/Reflex, 24 Hr, U

**Performing Location:** Mayo Clinic Laboratories - Rochester Superior Drive

### Specimen Requirements:

1. For the 48-hour period prior to the start of collection, as well as during the collection, patient **should not** eat seafood.
2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal 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 aliquot container with no metal cap or glued insert

**Submission Container/Tube:** Plastic, 10-mL urine tube

**Specimen Volume:** 6 mL

### Collection Instructions:

1. Collect urine for 24 hours.
2. Refrigerate specimen within 4 hours of completion of 24-hour collection.
3. See [Metals Analysis Specimen Collection and Transport](#) for complete instructions.

**Additional Information:** See [Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens](#) for multiple collections.

### Urine Preservative Collection Options:

**Note:** The addition of preservative or application of temperature controls **must occur within 4 hours of completion** of the collection.

Ambient (no additive)	No
Refrigerate (no additive)	Preferred
Frozen (no additive)	OK
50% Acetic Acid	OK
Boric Acid	No
Diazolidinyl Urea	No
6M Hydrochloric Acid	OK
6M Nitric Acid	OK
Sodium Carbonate	No
Thymol	No
Toluene	No

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

### Ask at Order Entry (AOE) Questions:

Test ID	Question ID	Description	Type	Reportable
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CDHMU	TIME4	Collection Duration (h)	Plain Text	Yes
CDHMU	VL16	Volume (mL)	Plain Text	Yes

## Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
8678	Cadmium, 24 Hr, U	Numeric	mcg/24 h	5612-7
TIME4	Collection Duration (h)	Alphanumeric		13362-9
VL16	Volume (mL)	Alphanumeric		3167-4
92215	Total Arsenic Concentration	Numeric	mcg/L	21074-0
48539	Arsenic, 24 Hr, U	Numeric	mcg/24 h	5587-1
92408	Mercury, 24 Hr, U	Numeric	mcg/24 h	6693-6
92409	Lead, 24 Hr, U	Numeric	mcg/24 h	5677-0

LOINC® and CPT codes are provided by the performing laboratory.

## Supplemental Report:

No

## Components:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
ASHU	Arsenic, 24 Hr, U	1	82175	Yes	Yes, (order ASU24)
CDHMU	Cadmium, 24 Hr, U	1	82300	Yes	Yes, (order CDU)
HGHU	Mercury, 24 Hr, U	1	83825	Yes	Yes, (order HGU)
PBHU	Lead, 24 Hr, U	1	83655	Yes	Yes, (order PBU)

## CPT Code Information:

82175

82300

83825

83655

## Reflex Tests:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
SPASU	Arsenic Speciation, 24 Hr, U	1	82175	No	Yes

## Result Codes for Reflex Tests:

Test ID	Result ID	Reporting Name	Type	Unit	LOINC®
SPASU	609384	Inorganic Arsenic (Toxic)	Alphanumeric	mcg/L	41992-9

SPASU	609385	Methylated Arsenic (Toxic)	Alphanumeric	mcg/L	96252-2
SPASU	609386	Organic Arsenic (Non-Toxic)	Alphanumeric	mcg/L	43181-7
SPASU	609406	Toxic Arsenic Concentration	Alphanumeric	mcg/L	96251-4
SPASU	609387	Total Arsenic Concentration	Numeric	mcg/L	21074-0

**Reference Values:**

**ARSENIC:**

0-17 years: Not established  
> or =18 years: <35 mcg/24 h

**CADMIUM:**

0-17 years: Not established  
> or =18 years: <0.7mcg/24 h

**MERCURY:**

0-17 years: Not established  
> or =18 years: <2 mcg/24 h  
Toxic concentration: >50 mcg/24 h

The concentration at which toxicity is expressed is widely variable between patients. The lowest concentration at which toxicity is usually apparent is 50 mcg/24 h.

**LEAD:**

0-17 years: Not established  
> or =18 years: <2 mcg/24 h