
Lab Dept: Urine/Stool

Test Name: HEAVY METALS SCREEN, URINE

General Information

Lab Order Codes: HMSU

Synonyms: Urine Screen for Arsenic, Cadmium, Lead, Mercury

CPT Codes: 82175 – Arsenic
82300 – Cadmium
83655 – Lead
83825 - Mercury

Test Includes: Includes arsenic, cadmium, lead, and mercury reported as mcg/specimen.

Logistics

Test Indications: Mayo Medical Laboratories offers both an essential elements screen and a heavy metals screen. In the case when a metals screen is ordered, we will assume this to be a heavy metals screen request. In case we have misinterpreted your request, the specimen will be retained for 2 weeks following testing during which time you may call and request other testing

Lab Testing Sections: Urine/Stool - Sendouts

Referred to: Mayo Medical Laboratories (MML Test: 8633/HMSU)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 - 3 days, test set up Monday - Saturday

Special Instructions: Submit an entire 24-hour urine collection. No preservative. Refrigerate specimen during and after collection. Obtain a 24 hour urine container with from the laboratory. [See Container](#).

[See Patient Preparation](#)

[See Limitations](#)

Note: Starting and ending times of collection are required for a timed urine collection and must be documented electronically or on the proper request form.

Specimen

Specimen Type: Urine, timed

Container: Plastic leakproof container (No preservative). Urine GUARD® collection container is preferred for a timed urine sample. A plastic urine container(s) with no metal caps or glued inserts.

Draw Volume: Submit an entire 24-hour urine collection

Processed Volume: 10 mL (Minimum: 2 mL) urine of the 24 hour collection

Collection: For timed urine collections, empty the bladder, discard the voided sample, and note the start time. Collect all urine voided for the specified time period. At the end of the period, note the finishing time, add the last voided sample to the container by emptying the bladder. Bring the refrigerated container to the lab. Make sure all specimens submitted to the laboratory are properly labeled with the patient's name, medical record number and date of birth.

Special Processing: Lab Staff: Remove 10 mL (Minimum: 2 mL) aliquot from a well mixed 24 hour specimen. Measure total volume. Send specimen refrigerated in a plastic, 13 mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert.

24 hour volume is required on request form for processing.

Patient Preparation: Patient should not eat seafood for a 48 hour period prior to the start of the urine collection.

Sample Rejection: Mislabeled or unlabeled specimens

Interpretive

Reference Range:

Arsenic

All ages:

0 - 35 mcg/specimen

Lead	
All ages:	0 - 4 mcg/specimen
Mercury	
0 – 15 years:	Not established
> or = 16 years:	0 – 9 mcg/specimen
Toxic concentration	>50 mcg/specimen
The concentration at which toxicity is expressed is widely variable between patients. 50 mcg/specimen is the lowest concentration at which toxicity is usually apparent.	
Cadmium	
0 – 15 years:	Not established
> or = 16 years:	0.0 – 1.3 mcg/specimen
All Heavy metals reference ranges apply to 24 hour specimens only.	

Critical Values:

See [Reference Range](#)

Limitations:

Gadolinium is known to interfere with most metals tests. If gadolinium-containing contrast media has been administered, a specimen cannot be collected for 96 hours.

Methodology:

Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)

References:

[Mayo Medical Laboratories](#) January 2011

Updates:

7/13/2010: Units changed from ug/specimen to mcg/specimen.
1/5/2011: Reference range updates.