TEST CHANGE

Cadmium, Urine

0025040, CADMIUM U

Specimen Requirements:	
Patient Preparation:	Diet, medication, and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician). High concentrations of iodine may interfere with elemental testing. Abstinence from iodine-containing medications or contrast agents for at least 1 month prior to collecting specimens for elemental testing is recommended.
Collect:	24-hour or random urine collection. Specimen must be collected in a plastic container. ARUP studies indicate that refrigeration of urine alone, during and after collection, preserves specimens adequately, if tested within 14 days of collection.
Specimen Preparation:	Transfer an 8 mL aliquot from a well-mixed collection to ARUP Trace Element-Free Transport Tubes (ARUP supply #43116). Available online through eSupply using ARUP Connect(TM) or contact ARUP Client Services at (800) 522-2787. (Min: 1 mL)
Transport Temperature:	Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions:	Urine collected within 48 hours after administration of a gadolinium (Gd) containing contrast media (may occur with MRI studies). Acid preserved urine. Specimen contaminated with blood or fecal material. Specimens transported in non-trace element free transport tube (with the exception of the original device).
Remarks:	Record total volume and collection time interval on transport tube and on test request form.
Stability:	Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 1 year
Methodology:	Quantitative Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)
Note:	
CPT Codes:	82300
New York DOH Approval Status:	This test is New York DOH approved.

Interpretive Data:

Urine cadmium concentrations~~levels~~ can be used to assess cadmium body burden. In chronic exposures, the kidneys are the primary target organ. Symptoms associated with cadmium toxicity vary based upon route of exposure and may include tubular proteinuria, fever, headache, dyspnea, chest pain, conjunctivitis, rhinitis, sore throat and cough. Ingestion of cadmium in high concentration may cause vomiting, diarrhea, salivation, cramps, and abdominal pain.

Elevated results may be due to skin or collection-related contamination, including the use of collection containers that are not certified to be trace element-free. If an elevated result is suspected to be due to contamination, confirmation with a second specimen collected in a certified trace element-free container is recommended.

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

~~Per 24h calculations are provided to aid interpretation for collections with a duration of 24 hours and an average daily urine volume. For specimens with notable deviations in collection time or volume, ratios of analytes to a corresponding urine creatinine concentration may assist in result interpretation.~~

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Reference Interval:

<table>
<tr><th>Test Number</th><th>Components</th><th>Reference Interval</th></tr>
<tr><td></td><td>Cadmium, Urine - per 24h</td><td>Less than or equal to ~~0.0~~3.2 microg/d</td></tr>
<tr><td></td><td>Cadmium, Urine - per volume</td><td>Less than or equal to ~~0.0~~1.0 microg/L</td></tr>
<tr><td></td><td>Cadmium, Urine - ratio to CRT</td><td>Less than or equal to ~~0.0~~3.2 microg/g CRT</td></tr>
<tr><td></td><td>Creatinine, Urine - per 24h</td><td></td></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Age</th><th>Male (mg/d)</th><th>Female (mg/d)</th></tr>
<tr><td>3-8 years</td><td>140-700</td><td>140-700</td></tr>
<tr><td>9-12 years</td><td>300-1300</td><td>300-1300</td></tr>
<tr><td>13-17 years</td><td>500-2300</td><td>400-1600</td></tr>
<tr><td>18-50 years</td><td>1000-2500</td><td>700-1600</td></tr>
<tr><td>51-80 years</td><td>800-2100</td><td>500-1400</td></tr>
<tr><td>81 years and older</td><td>600-2000</td><td>400-1300</td></tr>
</table>
</td></tr>
</table>