TEST CHANGE

Copper, Urine

0020461, COPPER 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 nonessential over-the-counter medications (upon the advice of their physician). Collection from patients receiving iodinated or gadolinium-based contrast media must be avoided for a minimum of 72 hours post exposure.~~postexposure.~~ Collection from patients with impaired kidney function should be avoided for a minimum of 14 days post contrast~~postcontrast~~ media exposure.
Collect:	24-hour urine. Refrigerate during collection. Specimen must be collected in a plastic container. Also acceptable: Random urine.
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:	Specimens collected within 72 hours after administration of iodinated or gadolinium-based contrast media. Acid preserved urine. Specimens transported in containers other than specified. Specimens contaminated with blood or fecal material.
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:	High concentrations of iodine or gadolinium may interfere with elemental testing.
CPT Codes:	82525
New York DOH Approval Status:	This test is New York DOH approved.

Interpretive Data:

Individuals with symptomatic Wilson disease usually excrete more than 100 ug~~µg~~ copper per day. Other conditions associated with elevated urine copper include cholestatic liver disease, proteinuria, and some medications.~~,~~ and contaminated specimens.

Although random specimens may contain diagnostic information, a 24-hour collection is a more

consistent indicator of urine copper.

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)

~~urine.~~

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.

Reference Interval:

Test Number	Components	Reference Interval
	Copper, Urine - per 24h	3.0-45.0 microg/d
	Copper, Urine - per volume	Less than or equal to 3.2 microg/dL
	Copper, Urine - ratio to CRT	10.0-45.0 microg/g CRT
	Creatinine, Urine - per 24h	

~~Deleted Cells~~

~~Age~~	~~Male (mg/d)~~	~~Female (mg/d)~~
~~3-8 years~~	~~140-700~~	~~140-700~~
~~9-12 years~~	~~300-1300~~	~~300-1300~~
~~13-17 years~~	~~500-2300~~	~~400-1600~~
~~18-50 years~~	~~1000-2500~~	~~700-1600~~
~~51-80 years~~	~~800-2100~~	~~500-1400~~
~~81 years and older~~	~~600-2000~~	~~400-1300~~

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