

## Quarterly HOTLINE: Effective November 13, 2017

## 0099475 Heavy Metals Panel 3, Urine with Reflex to Arsenic Fractionated

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## **Reference Interval:**

Test Number	Components	Reference Interval		
0025000	Arsenic, Urine with Reflex to Fractionated	Effective November 13, 2017		
		Test Number	Components	Reference Interval
			Arsenic, Urine-per volume	0.0-34.9 µg/L (based on Biological Exposure Index)
			Arsenic, Urine-per24h	0.0-49.9 μg/d
			Arsenic, Urine-ratio to CRT	0.0-29.9 ug/gCRT
		0020734	Arsenic, Fractionated, Urine	Refer to report
			Creatinine, Urine - per 24h	Refer to report
0025060	Lead, Urine	Effective November 13, 2017		
		Test Number	Components	Reference Interval
			Lead, Urine - per 24h	0.0-8.1 µg/d
			Lead, Urine - per volume	0.0-1.4 µg/L
			Lead Urine-ratio to CRT	0.0-1.4 ug/gCRT
			Creatinine, Urine - per 24h	Refer to report
0025050	Mercury, Urine	Effective November 13, 2017		
		Test Number	Components	Reference Interval
			Mercury, Urine - per 24h	0.0-2.9 μg/d
			Mercury, Urine - per volume	0.0-1.9 μg/L
			Mercury, Urine - ratio to CRT	0.0-20.0 μg/gCRT
			Creatinine, Urine - per 24h	Refer to report

Interpretive Data: Quantification of urine excretion rates before or after chelation therapy has been used as an indicator of lead exposure. Urinary excretion of >125 mg of lead per 24 hours is usually associated with related evidence of lead toxicity.

Urinary mercury levels predominantly reflect acute or chronic elemental or inorganic mercury exposure. Urine concentrations in unexposed individuals are typically less than  $10 \,\mu g/L$ . 24 hour urine concentrations of 30 to  $100 \,\mu g/L$  may be associated with subclinical neuropsychiatric symptoms and tremor while concentrations greater than  $100 \,\mu g/L$  can be associated with overt neuropsychiatric disturbances and tremors. Urine mercury levels may be useful in monitoring chelation therapy.

The ACGIH Biological Exposure Index (BEI) for arsenic in urine is  $35 \mu g/L$ . The ACGIH BEI is based on the sum of inorganic and methylated species. For specimens with a total arsenic concentration between  $35-2000 \mu g/L$ , fractionation is automatically performed to determine the proportions of inorganic, methylated and organic species. It may be appropriate to request fractionation for specimens with a total arsenic greater than  $30 \mu g/gCRT$  despite a total arsenic concentration less than  $35 \mu g/L$ . If low-level chronic poisoning is suspected, the  $\mu g/gCRT$  ratio may be a more sensitive indicator of arsenic exposure than the total arsenic concentration.

See Compliance Statement B: www.aruplab.com/CS

**HOTLINE NOTE:** There is a numeric map change associated with this test. Change the numeric map for component 0025062, Lead, Urine - per volume from XXXXX to XXXXX. Change the numeric map for component 0025061, Lead, Urine - per 24h from XXXXX to XXXXX. Change the numeric map for component 0025051, Mercury, Urine - per 24h from XXX to XXXX.