Test Definition: PBRC

Lead/Creatinine Ratio, U

Overview

Useful For

Detecting clinically significant lead exposure in random urine specimens

Method Name

Only orderable as part of profile. See PBRCR / Lead/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

NY State Available

Yes

Specimen

Specimen Type

Urine

Specimen Required

Only orderable as part of a profile. See PBRCR / Lead/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Specimen Minimum Volume

3 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

Clinical and Interpretive

Clinical Information

Increased urine lead concentration per gram of creatinine indicates significant lead exposure. Measurement of urine lead concentration per gram of creatinine before **and** after chelation therapy have been used as an indicator of significant lead exposure. An increase in lead concentration per gram of creatinine in the postchelation specimen of up to 6 times the concentration in the prechelation specimen is normal.

Blood lead is the best clinical correlate of toxicity.

For additional information, see PBBD / Lead with Demographics, Blood.

Reference Values

Only orderable as part of a profile. See PBRCR / Lead/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Interpretation

Urinary excretion of less than 4 mcg/g creatinine is not associated with any significant lead exposure.

Urinary excretion greater than 4 mcg/g creatinine is usually associated with pallor, anemia, and other evidence of lead toxicity.

Cautions

This test is not a substitute for blood lead screening.

Clinical Reference

1. Kosnett MJ, Wedeen RP, Rotherberg SJ, et al: Recommendations for medical management of adult lead exposure. Environ Health Perspect 2007;115:463-471

2. De Burbane C, Buchet JP, Leroyer A, et al: Renal and neurologic effects of cadmium, lead, mercury, and arsenic in children: evidence of early effects and multiple interactions at environmental exposure levels. Environ Health Perspect 2006;114:584-590

Performance

Method Description

Lead(Pb) in urine is analyzed by inductively coupled plasma-mass spectrometry (ICP-MS) in kinetic energy discrimination (KED) mode using gallium (Ga), rhodium (Rh), and iridium (Ir) as internal standards and a 5% nitric acid salt matrix calibration.(Unpublished Mayo method)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; 7 p.m.

Analytic Time

1 day

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
PBRC	Lead/Creatinine Ratio, U	13466-8

Result ID	Test Result Name	Result LOINC Value
48548	Lead/Creatinine Ratio, U	13466-8