## TEST CHANGE

Lead, Industrial, Whole Blood ~~Exposure Panel, Adults~~

0025016, LEAD-IND

| | |
|---|---|
| Specimen Requirements: | |
| Patient Preparation: | Collect from patient aged 16 years or older. |
| Collect: | Royal blue(K2EDTA), Royal blue (NaHep) or tan (K2EDTA). |
| Specimen Preparation: | Transport 3 or 6 mL whole blood (royal blue) (Min: 0.5 mL) OR Transport 3 mL whole blood (tan) (Min: 0.5 mL) |
| Transport Temperature: | Refrigerated. |
| Unacceptable Conditions: | Serum. Specimens collected in tubes other than Royal blue(K2EDTA), Royal blue (NaHep), or tan (K2EDTA). Hemolyzed or clotted specimens. |
| Remarks: | |
| Stability: | Ambient: 30 hours; Refrigerated: 5 weeks; Frozen: Unacceptable |
| Methodology: | Quantitative Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)/Hematofluorometry |
| Performed: | Sun-Sat |
| Reported: | 1-5 days |
| Note: | |
| CPT Codes: | 83655; 84202 |
| New York DOH Approval Status: | This test is New York DOH approved. |
| Interpretive Data: | |

Interpretive Data

Reference intervals are based on the CDC's Blood Lead Reference Value (BLRV). ~~Analysis performed by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS).~~

~~Elevated results may be due to skin or collection-related contamination, including the use of a noncertified lead-free collection/transport tube. If contamination concerns exist due to elevated levels of blood lead, confirmation with a second specimen collected in a certified lead-free tube is recommended.~~

~~Reference interval and interpretive comments are based on the CDC's "Childhood Lead Poisoning Prevention: Recommended Actions Based on Blood Lead Level" and the "Adult Blood Lead Epidemiology and Surveillance: Reference Blood Lead Levels (BLLs) for Adults in the U.S."~~

Thresholds and time intervals for retesting, medical evaluation, and response vary by state and regulatory body. ~~Actions described by OSHA in 1978 and finalized in 1983 are shown below.~~ Contact your State Department of Health and/or applicable regulatory agency for specific guidance on medical management recommendations. Actions described by OSHA in 1978 and finalized in 1983 are shown below.

Elevated results may be due to skin- or collection-related contamination, including the use of tubes 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 tube is recommended.

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

| ~~Concentration~~ | ~~Comment~~ | |
|---|---|---|
| ~~5-19.9 ug/dL~~ | ~~Medical removal is recommended for pregnant women or those who are trying or may become pregnant. Adverse health effects are possible. Reduced lead exposure and increased blood lead monitoring are recommended.~~ | |
| ~~20-69.9 ug/dL~~ | ~~Adverse health effects are indicated. Medical removal from lead exposure is required by OSHA if blood lead level exceeds 50 ug/dL. Prompt medical evaluation is~~ | |

| | | |
|---|---|---|
| | ~~recommended.~~ | |
| ~~Greater than 69.9 ug/dL~~ | ~~Critical. Immediate medical evaluation is recommended. Consider chelation therapy when symptoms of lead toxicity are present.~~ | |

"Occupational Safety and Health Standards: Lead (1983). 29 CFR Part 1910.1025 App C" Action required for workers with Elevated Lead Values OSHA, Occupational Exposure to Lead, 1978

| No. of Tests | Lead | Action Required |
|---|---|---|
| 1 | Greater than equal to 40.0 ug/dL | Notification of worker in writing; medical examination of worker and consultation. |
| 3 (average) | Greater than or equal to 50.0 ug/dL | Removal of worker from job with potential lead exposure. |
| 1 | Greater than or equal to 60.0 ug/dL | Removal of worker from job with potential lead exposure. |
| 2 | Less than 40.0 ug/dL | Reinstatement of worker in job with potential lead exposure is based upon symptoms and medical evaluation. |

OSHA requirements in effect since 1978 call for the measurement of whole blood lead and zinc protoporphyrins (ZPP) (NCCLS document C42-A, Nov. 1996) to evaluate the occupational exposure to lead. OSHA requires ZPP whole blood testing to be reported in units of ug/dL. For adults, conversion of ZPP units of ug/dL whole blood assumes a hematocrit of 45 percent. Conversion factor: umol/mol heme x 0.584= ug/dL.

Reference Interval:

| Test Number | Components | Reference Interval |
|---|---|---|
| | Lead, Industrial, Whole Blood | Less than or equal to 3.4~~.9~~ µg/dL |
| | Zinc Protoporphyrin (ZPP), Whole~~,~~ Blood | 0-40 µg/dL |
| | Zinc Protoporphyrin (ZPP) WholeBld Ratio | 0-69 µmol ZPP/mol heme |