Technical Bulletin

Guidelines for Measuring Lead in Blood: Repeat Analysis and Confirmation Testing[1]

Magellan Diagnostics

Guideline 13: Repeat Analysis of the Original Specimen

1. If initial result is ≥ 5 µg/dL, reanalyze, if sample volume permits, to rule out contamination.
   - If there is insufficient volume, e.g. capillary specimen, report initial result and refer patient for confirmatory testing. (See Guideline 14)
   - If a large discrepancy is encountered, the specimen should be analyzed a 3rd time, discarding the outlier and reporting the average of the remaining two.***
2. For any result exceeding 5 µg/dL, refer the patient for confirmatory testing.

Guideline 14: Confirmatory Testing

1. When blood lead results ≥ 5 µg/dL are obtained, the laboratory must either:
   - Refer the specimen to a CLIA certified lab for confirmatory testing or
   - If there is insufficient sample for another analysis, see Guideline 15.
     - Preliminary results may be released with a comment that 'results of the confirmatory test are pending'.

Guideline 15: Reporting POC Results to Clinical Health Care Providers

1. Blood lead results ≥ 5 µg/dL require further investigation.
   - Consider using a comment similar to: Blood lead levels ≥ 5 µg/dL indicate that a child has been exposed to lead at levels higher than most children. The blood lead level should be confirmed using a venous blood sample. Since no safe blood lead level has been identified, no detectable level should be considered 'normal'.

***Large Discrepancies** are defined as:

Blood Lead Result	Discrepancy Limit
5 - 20 µg/dL	> 3 µg/dL
21 - 40 µg/dL	> 4 µg/dL
> 40 µg/dL	> 10%

Reference:

1. ***Guidelines for Measuring Lead in Blood Using Point of Care Instruments, Draft Report of the Laboratory Workgroup of the Advisory Committee on Childhood Lead Poisoning Prevention*** *Of the Centers for Disease Control and Prevention October 24, 2013* ***http://www.cdc.gov/nceh/lead/ACCLPP/20131024_POCguidelines_final.pdf*** [accessed 24 Jan 2014].