Overview

Useful For
Detecting lead exposure in hair specimens

Special Instructions
- Collecting Hair and Nails for Metals Testing

Method Name
Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

NY State Available
No

Specimen

Specimen Type
Hair

Specimen Required

Supplies: Hair and Nails Collection Kit (T565)

Specimen Volume: 0.2 g

Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions.

Additional Information: If known, indicate source of hair (axillary, head, or pubic).

Specimen Minimum Volume
0.05 g

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

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hair</td>
<td>Ambient (preferred)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Clinical and Interpretive
Clinical Information
Hair analysis for lead can be used to corroborate blood analysis or to document past lead exposure. If the hair is collected and segmented in a time sequence (based on length from root), the approximate time of exposure can be assessed.

Reference Values
0.0-3.9 mcg/g of hair

Reference values apply to all ages.

Interpretation
Normal hair lead content is below 5.0 mcg/g. Hair lead content above 10.0 mcg/g indicates significant lead exposure.

Cautions
Blood lead analysis has the strongest correlation with toxicity.

Clinical Reference
1. Strumylaite L, Ryselis S, Kregzdyte R: Content of lead in human hair from people exposed to lead. Int J Hyg Environ Health 2004;207:345-351


Performance

Method Description
Arsenic, mercury, and lead in hair are analyzed by inductively coupled plasma-mass spectrometry (ICP-MS) in kinetic energy discrimination (KED) mode using gallium, iridium, and lutetium as internal standards, and a salt matrix calibration.(Unpublished Mayo method)

PDF Report
No

Day(s) and Time(s) Test Performed
Tuesday; 3 p.m.

Analytic Time
2 days

Maximum Laboratory Time
7 days

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.

CPT Code Information

83655

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBHA</td>
<td>Lead, Hair</td>
<td>5673-9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>31898</td>
<td>Lead, Hair</td>
<td>5673-9</td>
</tr>
<tr>
<td>PBHSC</td>
<td>Specimen Source</td>
<td>31208-2</td>
</tr>
</tbody>
</table>