Overview

Useful For
An adjunct to urine D-lactate (preferred), in the diagnosis of D-lactate acidosis

Testing Algorithm
DLAU / D-Lactate, Urine is the preferred specimen for D-lactate determinations.

Special Instructions
- Biochemical Genetics Patient Information

Method Name
Enzymatic

NY State Available
Yes

Specimen

Specimen Type
Plasma NaFl-KOx

Necessary Information
For L-lactate (lactic acid), order LAA / Lactate, Plasma

Specimen Required
Collection Container/Tube: Grey top (potassium oxalate/sodium fluoride) (T275)
Submission Container/Tube: Plastic vial

Specimen Volume: 1 mL

Collection Instructions: Spin down and immediately freeze specimen.

Additional Information: For L-lactate (lactic acid), order LLA / Lactate, Plasma.

Specimen Minimum Volume
0.55 mL

Reject Due To

<table>
<thead>
<tr>
<th>Condition</th>
<th>Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemolysis</td>
<td>Mild OK; Gross OK</td>
</tr>
<tr>
<td>Lipemia</td>
<td>Mild OK; Gross OK</td>
</tr>
<tr>
<td>Icterus</td>
<td>Mild OK; Gross OK</td>
</tr>
<tr>
<td>Other</td>
<td>NA</td>
</tr>
</tbody>
</table>

Specimen Stability Information
Clinical and Interpretive

Clinical Information

D-lactate is produced by bacteria residing in the colon when carbohydrates are not completely absorbed in the small intestine. When large amounts of D-lactate are present, individuals can experience metabolic acidosis, altered mental status (from drowsiness to coma), and a variety of other neurologic symptoms, particularly dysarthria and ataxia.

D-lactic acidosis is typically observed in patients with a malabsorptive disorder, such as short-bowel syndrome, or, following a jejunoileal bypass. In addition, healthy children presenting with gastroenteritis may also develop the critical presentation of D-lactic acidosis.

Routine lactic acid determinations in blood will not reveal abnormalities because most lactic acid assays measure only L-lactate. Accordingly, D-lactate analysis must be specifically requested (eg, DLAC / D-Lactate, Plasma). However, as D-lactate is readily excreted in urine, DLAU / D-Lactate, Urine is the preferred specimen for D-lactate determinations.

Reference Values
0.0-0.25 mmol/L

Interpretation

Increased levels are consistent with D-lactic acidosis. However, because D-lactate is readily excreted, urine determinations are preferred.

Cautions

Urine is the preferred specimen to determine D-lactate.

The test performed was D-lactate. This is a product of bacterial overgrowth in the gastrointestinal tract. It should not be confused with L-lactate, which accumulates in some metabolic acidosis.

Clinical Reference


Performance

Method Description

D-lactate is oxidized to pyruvate in the presence of D-lactate dehydrogenase and nicotinamide adenine dinucleotide phosphate (NAD). The reaction proceeds because the pyruvate is continually removed as a pyruvate-hydrazone complex. The quantity of reduced NAD produced is directly proportional to the amount of D-lactate oxidized and is
Test Definition: DLAC
D-Lactate, P


PDF Report
No

Day(s) and Time(s) Test Performed
Varies

Analytic Time
4 days

Maximum Laboratory Time
8 days

Specimen Retention Time
1 month

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
83605

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLAC</td>
<td>D-Lactate, P</td>
<td>14045-9</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>8878</td>
<td>D-Lactate, P</td>
<td>14045-9</td>
</tr>
</tbody>
</table>