### Overview

### Useful For
Assisting in the differentiation between osmotic and non-osmotic diarrhea

Screening test for:
- Diarrhea from disaccharidase deficiencies, (eg, lactase deficiency)
- Monosaccharide malabsorption

### Method Name
Benedict's Copper Reduction Reaction

### NY State Available
Yes

### Specimen

#### Specimen Type
Fecal

#### Specimen Required

**Supplies:** Stool container, Small (Random), 4 oz Random (T288)

**Container/Tube:** Fecal container

**Specimen Volume:** 3 g

#### Collection Instructions:

1. Collect a loose, unpreserved, random fecal specimen.
2. Freeze immediately.

#### Additional Information:  
If additional tests are ordered, aliquot and separate sample prior to freezing to allow 1 container per test.

#### Forms
If not ordering electronically, complete, print, and send a [Gastroenterology and Hepatology Client Test Request](#) (T728) with the specimen.

### Specimen Minimum Volume
2 g

### Reject Due To

<table>
<thead>
<tr>
<th>Mixed urine with stool</th>
<th>Reject</th>
</tr>
</thead>
</table>
Specimen Stability Information

<table>
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<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal</td>
<td>Frozen</td>
<td>7 days</td>
<td></td>
</tr>
</tbody>
</table>

Clinical and Interpretive

Clinical Information

Fecal reducing substances (carbohydrates) aids in determining the underlying cause of diarrhea. Elevations in fecal reducing substances help distinguish between osmotic diarrhea caused by abnormal excretion of various sugars as opposed to diarrhea caused by viruses and parasites. Increased reducing substances in stool are consistent with, but not diagnostic of, primary or secondary disaccharidase deficiency (primarily lactase deficiency) or intestinal monosaccharide malabsorption. Similar intestinal absorption deficiencies are associated with short bowel syndrome and necrotizing enterocolitis.

Reference Values

Negative or trace

Interpretation

Negative: negative

Normal: < or =0.25 g/dL (trace)

Suspicious: >0.25 to 0.50 g/dL (grade 1)

Abnormal: >0.50 g/dL (grade 2-4)

Cautions

This test has poor sensitivity for oligosaccharides.

Antibiotics can alter the intestinal flora and affect acid production.

False-positive reactions due to drugs (salicylates, penicillin, ascorbic acid, nalidixic acid, cephalosporins and probenecid) are possible.

Feces may be contaminated with urine, in which case glycosuria will give false-positive results.

Diaper collections can be falsely decreased as the fluid portion containing water soluble sugars is absorbed into the diaper.

Ambient transport temperatures result in growth of bacteria that consume sugars resulting in falsely decreased values.

Clinical Reference


**Performance**

**Method Description**

Copper sulfate in the tablet reacts with reducing substances converting cupric sulfate to cuprous oxide. (Package insert: AimTab Reducing Substances Tablets. Germaine Laboratories, INC, 12/2015)

**PDF Report**

No

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

Monday through Saturday

**Analytic Time**

1 day

**Maximum Laboratory Time**

3 days

**Specimen Retention Time**

7 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**

84376
Test Definition: UREDF
Reducing Substance, F

<table>
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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
<tr>
<td>UREDF</td>
<td>Reducing Substance, F</td>
<td>11060-1</td>
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<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
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<tbody>
<tr>
<td>6215</td>
<td>Reducing Substance, F</td>
<td>11060-1</td>
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