# Test Definition: UREDF

Reducing Substance, Feces

## Overview

### Useful For

Assisting in the differentiation between osmotic and nonosmotic 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 Test Request (T728) with the specimen.

### Specimen Minimum Volume

2 g

### Reject Due To

| | |
|---|---|
| Urine and feces mixed<br>Feces collected | Reject |

| | |
|---|---|
| in any preservative or fixative | |

### Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---|---|---|---|
| Fecal | Frozen | 7 days | |

## Clinical & 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.

Bacteria in specimen consumes sugars resulting in falsely decreased values. Specimen should be frozen within 30 minutes of collection.

### Clinical Reference

1. Siddiqui HA, Salwen MJ, Shaikh MF, Bowne WB: Laboratory diagnosis of gastrointestinal and pancreatic disorders. In: McPherson RA, Pincus MR, eds. Henry's Clinical Diagnosis and Management by Laboratory Methods. 23rd ed. Elsevier; 2017:306-323
2. Branski D: Disorders of malabsorption. In: Kliegman RM, Stanton BF, St. Geme JW, eds. Nelson Textbook of Pediatrics. Elsevier; 2016:1831-1850
3. Bhatia J, Prihoda AR, Richardson CJ: Parenteral antibiotics and carbohydrate intolerance in term neonates. Am J Dis Child. 1986;140(2):111-113
4. Book LS, Herbst JJ, Jung AL: Carbohydrate malabsorption in necrotizing enterocolitis. Pediatrics. 1976;57(2):201-204
5. Krom FA, Frank CG: Clinitesting neonatal stools. Neonatal Network. 1989 Oct;8(2):37-40
6. Burtis CA, Ashwood ER: Qualitative methods for total reducing substances. In: Tietz Textbook of Clinical Chemistry. 2nd ed. 1994;968-969

## 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) Performed

Monday through Saturday

### Report Available

1 to 3 days

### Specimen Retention Time

7 days

### Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Main Campus

## Fees & 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 account representative. For assistance, contact Customer Service.

### Test Classification

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This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

## CPT Code Information

84376

## LOINC® Information

| Test ID | Test Order Name | Order LOINC® Value |
|---|---|---|
| UREDF | Reducing Substance, F | 11060-1 |

| Result ID | Test Result Name | Result LOINC® Value |
|---|---|---|
| 6215 | Reducing Substance, F | 11060-1 |