Test Definition: UREDF

Reducing Substance, F

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 (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

Other	Urine and stool mixed

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen	7 days	

Clinical and Interpretive

Clinical Information

Testing for fecal reducing substances (carbohydrates) aides in determining the underlying cause of diarrhea. Elevations in fecal reducing substances helps 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

1. Siddiqui HA, Salwen MJ, Shaikh MF, et al: Laboratory Diagnosis of Gastrointestinal and Pancreatic Disorders. In Henry's Clinical Diagnosis and Management by Laboratory Methods. 23rd edition. Elsevier Inc, St. Louis, MO 2017;22:306-323 e2

2. Branski D: Disorders of Malabsorption. In Nelson Textbook of Pediatrics. Edited by RM Kleigman, BF Stanton, JW St. Geme, et al. Elsevier In., Philadelphia, PA, 2016, pp1831-1850.e2

3. Bhatia J, Prihoda AR, Richardson CJ: Parenteral antibiotics and carbohydrate intolerance in term neonates. Am J Dis Child 1986;140:111-113

4. Book LS, Herbst JJ, Jung AL: Carbohydrate malabsorption in necrotizing enterocolitis. Pediatrics 1976;57:201-204

5. Krom FA, Frank CG. Clinitesting neonatal stools. Neonatal Network 1989;8(2):37-40

6. Qualitative Methods for Total Reducing Substances. In Tietz Textbook of Clinical Chemistry, Second Edition. 1994, pp 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, San Antonio, TX 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

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