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 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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Reducing Substance, Feces

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