

Overview

Useful For

Diagnosing protein-losing enteropathies, especially when used in conjunction with serum alpha-1-antitrypsin (A1A) levels as a part of A1A clearance studies

Method Name

Nephelometry

NY State Available

Yes

Specimen

Specimen Type

Fecal

Advisory Information

The preferred test for diagnosing protein-losing enteropathies is CA1A / Alpha-1-Antitrypsin Clearance, Feces and Serum.

Specimen Required

Supplies: Stool container, Small (Random), 4 oz (T288); Stool Collection Kit, Random (T635)

Container/Tube: Stool container (T288)

Specimen Volume: 5 g

Collection Instructions: Collect a random fecal specimen.

Specimen Minimum Volume

Homogenized Stool: 1 mL

Reject Due To

Feces collected in any preservative or fixative	Reject
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Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Ambient	14 days	
	Refrigerated	14 days	

Clinical and Interpretive

Clinical Information

Alpha-1-antitrypsin (A1A) is resistant to degradation by digestive enzymes and is, therefore, used as an endogenous marker for the presence of blood proteins in the intestinal tract. A1A clearance is reliable for measuring protein loss distal to the pylorus.

Gastrointestinal protein enteropathy has been associated with regional enteritis, sprue, Whipple intestinal lipodystrophy, gastric carcinoma, allergic gastroenteropathy, intestinal lymphangiectasia, constrictive pericarditis, congenital hypogammaglobulinemia, and iron deficiency anemia associated with intolerance to cow's milk.

Reference Values

< or =54 mg/dL

Interpretation

Patients with protein-losing enteropathies generally have alpha-1-antitrypsin fecal concentrations over 100 mg/mL.

Borderline elevations above the normal range are equivocal for protein-losing enteropathies.

Cautions

The clearance studies using 24-hour fecal specimens and serum determinations are preferred in order to normalize the large range of serum alpha-1-antitrypsin (A1A) concentrations and the variability in random fecal A1A concentration. In the absence of either a 24-hour fecal collection or a contemporary serum specimen, the fecal concentration of A1A can be used as a surrogate marker.

Clinical Reference

1. Florent C, L'Hirondel C, Desmazes C, et al: Intestinal clearance of alpha 1-antitrypsin. A sensitive method for the detection of protein losing enteropathy. *Gastroenterology* 1981;81:777-780
2. Crossley JR, Elliott RB: Simple method for diagnosing protein-losing enteropathy. *Br Med J* 1977;1:428-429
3. Perrault J, Markowitz H: Protein-losing gastroenteropathy and the intestinal clearance of serum alpha-1-antitrypsin. *Mayo Clin Proc* 1984;59:278-279

Performance**Method Description**

Nephelometry. Immunonephelometry quantitates the alpha-1-antitrypsin (A1A) contained in a fecal specimen. In the absence of a timed fecal collection, an A1A fecal concentration will be reported. (Instruction manual: Siemens Nephelometer II. Siemens, Inc., Newark, DE, May 2005)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; Continuously until 2 p.m.

Analytic Time

1 day

Maximum Laboratory Time

2 days

Specimen Retention Time

14 days; supernatant aliquot only, the feces are discarded after processing

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 has been modified from the manufacturer's instructions. Its performance characteristics were 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

82103

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
A1AF	Alpha-1-Antitrypsin, Random, F	9407-8

Result ID	Test Result Name	Result LOINC Value
AAT_F	Alpha-1-Antitrypsin, Random, F	9407-8