Test Definition: HQ

HemoQuant, Feces

Overview

Useful For

Detection of blood in feces

Evaluation of iron deficiency

Detection of bleeding as a complication of anticoagulant therapy and other medication regimens

This test is **not specific for** bowel cancer.

Method Name

Fluorescence Quantitation

NY State Available

Yes

Specimen

Specimen Type

Fecal

Specimen Required

Patient Preparation: Patient should refrain from ingesting red meat and aspirin-containing products (eg, Excedrin, Aspirin) for 3 days prior to specimen collection.
Collection Container/Tube: Hemoquant Specimen Collection (T134)
Submission Container/Tube: Screw-capped tube
Specimen Volume: 1 g
Collection Instructions: Collect random specimen from a single defecation.

Specimen Minimum Volume

1 g

Reject Due To

Gross hemolysis	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container

Fecal	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen		

Clinical & Interpretive

Clinical Information

Several noninvasive tests are available to detect gastrointestinal (GI) bleeding. However, guaiac type and immunochemical tests for occult bleeding are affected by the presence of reducing or oxidizing substances and are insensitive for the detection of upper GI tract (esophagogastric) bleeding, where most clinically significant occult GI bleeding occurs.

The HemoQuant test is the most reliable, noninvasive test currently available for detecting bleeding of the esophago-GI tract. Unlike other tests for blood in feces, this test detects both intact heme and porphyrins from partly degraded heme. Additionally, test results are not complicated by either the water content of the specimen or the presence of reducing or oxidizing substances. Furthermore, HemoQuant testing is sensitive to both proximal and distal sources of occult GI bleeding.

Normally, one gram of feces may contain 0.0 to 2.0 mg hemoglobin; this corresponds to a daily loss of up to 2 mL blood. A demonstration of increased Hb in feces indicates bleeding in the alimentary tract (or ingestion of anticoagulants, aspirin, or red meat).

Reference Values

Normal:
< or =2.0 mg total hemoglobin/g feces

Marginal:
2.1-4.0 mg total hemoglobin/g feces*
*2.1-4.0 mg Hb/g is considered marginally elevated, but not clinically significant, if red meat, warfarin, or aspirin was ingested 72 hours prior to collection.

Elevated:
>4.0 mg total hemoglobin/g feces

Interpretation

Elevated levels are an indicator of the presence of blood in the feces, either from benign or malignant causes.

Cautions

Heme from ingested red meat will increase HemoQuant test values. Patients should be advised to avoid eating red meat for 3 days before collecting specimens. Fish and poultry may be substituted.

The elevated porphyrins of lead intoxication, erythrocytic protoporphyria and variegate porphyria may raise HemoQuant values in the absence of gut bleeding.

Recent studies have indicated that cancerous lesions in their early stages often do not bleed or bleed only intermittently.

Clinical Reference

1. Ahlquist DA, McGill DB, Schwartz S, Taylor WF, Ellefson M, Owen RA. HemoQuant, a new quantitative assay for fecal hemoglobin. Comparison with Hemoccult. Ann Intern Med. 1984;101(3):297-302
2. Ahlquist DA, Wieand HS, Moertel CG, et al. Accuracy of fecal occult blood screening for colorectal neoplasia. A prospective study using Hemoccult and HemoQuant tests. JAMA. 1993;269(10):1262-1267
3. Harewood GC, McConnell JP, Harrington JJ, Mahoney DW, Ahlquist DA. Detection of occult upper gastrointestinal bleeding: performance differences in fecal blood tests. Mayo Clin Proc. 2002;77(1):23-28
4. Ahlquist DA, McGill DB, Schwartz S, Taylor WF, Owens RA. Fecal blood levels in health and disease. A study using HemoQuant. N Engl J Med. 1985;312(22):1422-1428
5. Barber MD, Abraham A, Brydon WG, Waldron BM, Williams AJ. Assessment of faecal occult blood loss by qualitative and quantitative methods. J R Coll Surg Edinb. 2002;47(2):491-494
6. Rockey DC, Altayar O, Falck-Ytter Y, Kalmaz D. AGA Technical review on gastrointestinal evaluation of iron deficiency anemia. Gastroenterology. 2020;159(3):1097-1119. doi:10.1053/j.gastro.2020.06.045

Performance

Method Description

Hemoglobin and the heme released by hemoglobin degradation are converted to porphyrins. These porphyrins are quantified by fluorescence measurement after extraction of any interfering fluorescing substances.(Schwartz S, Dahl J, Ellefson M, Ahlquist D. The "HemoQuant" test: a specific and quantitative determination of heme [hemoglobin] in feces and other materials. Clin Chem 1983;29[12]:2061-2067)

PDF Report

No

Day(s) Performed

Monday through Saturday

Report Available

1 to 2 days

Specimen Retention Time

14 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

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

84126

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
HQ	Hemoquant, F	27396-1

Result ID	Test Result Name	Result LOINC® Value
2410	Fecal Hemoglobin	27396-1