

Overview

Useful For

Suggesting the presence of pathogens such as *Salmonella*, *Shigella*, and amebiasis

Method Name

Microscopic/Trichrome Stain

NY State Available

Yes

Specimen

Specimen Type

Fecal

Specimen Required

Supplies: ECOFIX Stool Transport Medium only (T790)

Container/Tube:

Preferred: ECOFIX preservative

Acceptable: Zinc Polyvinyl alcohol (Zn-PVA) preservative

Specimen Volume: Representative portion of collection

Collection Instructions:

1. Collect a random fecal specimen.
2. Carefully follow instructions on container.
 - a. Place specimen into ECOFIX preservative vial OR Zinc-PVA preservative vial within 30 minutes of passage or collection. Refer to the fill line on the preservative vial. **Do not fill** above the line indicated on the container.
 - b. Mix the contents of the tube with the spoon, twist the cap tightly closed, and shake vigorously until the contents are well mixed.

Forms

If not ordering electronically, complete, print, and send a [Microbiology Test Request](#) (T244) with the specimen.

Specimen Minimum Volume

5 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
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Fecal	Ambient (preferred)	21 days	PVA OR ECOFIX
	Refrigerated	21 days	PVA OR ECOFIX

Clinical & Interpretive

Clinical Information

Leukocytes are not normally seen in feces in the absence of infection or other inflammatory processes. Fecal leukocytosis is a response to infection with microorganisms that invade tissue or produce toxins, which causes tissue damage.

Fecal leukocytes are commonly found in patients with shigellosis and salmonellosis and sometimes in amebiasis. Mononuclear cells are found in typhoid fever.

Ulcerative colitis may also be associated with fecal leukocytosis.

Reference Values

An interpretive report will be provided.

Interpretation

When fecal leukocytes are found they are reported in a semi-quantitative manner: "few" indicates = 2/100x oil immersion microscopic field (OIF); "moderate" indicates 3-9/100x OIF; "many" indicates =10/100x OIF. Erythrocytes are reported in the same manner.

The greater the number of fecal leukocytes, the greater the likelihood that an invasive pathogen such as Salmonella or Shigella is present.

The presence of few or no leukocytes and many erythrocytes suggests possible amebiasis.

Fecal leukocytes are rarely seen in diarrhea caused by other parasites or viruses.

Cautions

Fecal leukocyte examinations cannot be performed on formalin-preserved specimens. Therefore, ECOFIX-preserved or zinc polyvinyl alcohol-preserved feces must be sent to the laboratory.

Clinical Reference

1. LaRocque RC and Harris JB: Syndromes of Enteric Infection. In: Bennett JE, Dolin R, and Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020:chap 96
2. Harris JC, Dupont HL, Hornick RB. Fecal leukocytes in diarrheal illness. *Ann Intern Med.* 1972;76(5):697-703. doi:10.7326/0003-4819-76-5-697
3. Guerrant RL, Shields DS, Thorson SM, Schorling JB, Gröschel DH. Evaluation and diagnosis of acute infectious diarrhea. *Am J Med.* 1985;78(6B):91-98. doi:10.1016/0002-9343(85)90370-5
4. Pickering LK, DuPont HL, Olarte J, Conklin R, Ericsson C. Fecal leukocytes in enteric infections. *Am J Clin Pathol.* 1977;68(5):562-565. doi:10.1093/ajcp/68.5.562

Performance

Method Description

Feces preserved in ECOFIX preservative or polyvinyl alcohol are stained with trichrome. (Garcia LS: Diagnostic Medical Parasitology. 6th ed. ASM Press; 2016)

PDF Report

No

Day(s) Performed

Monday through Saturday

Report Available

4 to 6 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

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

89055

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
LEU	Fecal Leukocytes	13655-6

Result ID	Test Result Name	Result LOINC® Value
LEU	Fecal Leukocytes	13655-6