Overview

Useful For
Determining whether a bacterial enteric pathogen is the cause of diarrhea

May be helpful in identifying the source of the infectious agent (eg, dairy products, poultry, water, or meat)

This test is generally **not useful for** patients hospitalized more than 3 days because the yield from specimens from these patients is very low, as is the likelihood of identifying a pathogen that has not been detected previously.

Reflex Tests

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>GID</td>
<td>Bacteria Identification</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
<tr>
<td>ISAE</td>
<td>Aerobe Ident by Sequencing</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
<tr>
<td>REFID</td>
<td>Additional Identification Procedure</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
<tr>
<td>SALS</td>
<td>Serologic Agglut Method 1 Ident</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
<tr>
<td>SHIG</td>
<td>Serologic Agglut Method 3 Ident</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
<tr>
<td>RMALD</td>
<td>Ident by MALDI-TOF mass spec</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
</tbody>
</table>

Testing Algorithm
When this test is ordered, the reflex tests may be performed and charged separately. Reportable pathogens include: *Aeromonas*, *Campylobacter*, *Salmonella*, *Shigella*, and *Yersinia*.

**Note**: Does not include culture for *Escherichia coli* O157:H7. All bacterial isolates worked up, to rule in or out as a pathogen, will be billed for work performed and resources consumed.

See [Laboratory Testing for Infectious Causes of Diarrhea](#) in Special Instructions.

Special Instructions
- [Laboratory Testing for Infectious Causes of Diarrhea](#)

Method Name
Conventional Culture

NY State Available
Yes

Specimen
Specimen Type
Fecal

Advisory Information
1. If Vibrio is suspected, order VIBC / *Vibrio* Culture, Feces.

2. If susceptibility testing is needed; also order ZMMLS / Antimicrobial Susceptibility, Aerobic Bacteria, MIC, Varies. Pathogens for which susceptibility testing would be pursued are: *Shigella* species, *Yersinia* species, *Campylobacter* species, *Arcobacter* species, and *Vibrio* species. If susceptibilities are not appropriate they will not be performed and ZMMLS will be canceled at report time.

3. *Clostridioides* (*Clostridium*) *difficile*, a major cause of nosocomial diarrhea, is not detected by this test. Order CDFRP / *Clostridioides* [*Clostridium*] *difficile* Toxin, Molecular Detection, PCR, Feces.

4. *Escherichia coli* O157:H7 is not detected by this test. Order STFRP / Shiga Toxin, Molecular Detection, PCR, Feces.

Additional Testing Requirements
In some cases, local public health requirements may impact Mayo Clinic Laboratories (MCL) clients and require submission of isolates to a public health laboratory. Clients should familiarize themselves with local requirements and will be responsible for submitting isolates to the appropriate public health laboratory. Clients can obtain isolates of *Vibrio* species by calling 800-533-1710 as soon as possible to ensure viability of the organism.

Shipping Instructions
Specimen must arrive within 96 hours of collection.

Necessary Information
Specimen source is required.

Specimen Required
Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen.

Supplies: C and S vial (T058)

Specimen Type: Preserved Feces

Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S)

Specimen Volume: Representative portion of fecal specimen

Collection Instructions:
1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium.

2. Place feces in preservative within 2 hours of collection.

3. Place vial in a sealed plastic bag.

Forms
If not ordering electronically, complete, print, and send a Gastroenterology and Hepatology Client Test Request (T728) with the specimen.

**Specimen Minimum Volume**

1 mL

**Reject Due To**

| Unpreserved stool ECOFIX preservative Formalin or PVA fixative | Reject |

**Specimen Stability Information**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal</td>
<td>Ambient (preferred)</td>
<td>4 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerated</td>
<td>4 days</td>
<td></td>
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</tbody>
</table>

**Clinical and Interpretive**

**Clinical Information**

Diarrhea may be caused by a number of agents (eg, bacteria, viruses, parasites, and chemicals) and these agents may result in similar symptoms. A thorough patient history covering symptoms, severity, duration of illness, age, travel history, food consumption, history of recent antibiotic use, and illnesses in the family or other contacts will help the physician categorize the disease and ensure that any special requests are communicated to the laboratory.

**Reference Values**

No growth of pathogens

**Interpretation**

The growth of an enteric pathogen identifies the cause of diarrhea.

**Cautions**

No significant cautionary statements

**Clinical Reference**


**Performance**

**Method Description**
The fecal specimen is inoculated onto selective media designed to inhibit growth of normal bowel flora while allowing growth of the enteric pathogens. The following media are used: sheep blood agar, Hektoen enteric (HE) agar, eosin-methylene blue (EMB) agar, *Campylobacter* agar, cefsulodin-irgasan-novobiocin (CIN) agar, and the enrichment broth, selenite F. After incubation, suspect colonies are identified using 1 or a combination of the following techniques: matrix-assisted laser desorption/ionization time of flight (MALDI-TOF) mass spectrometry, conventional biochemical tests, carbon source utilization, serologic methods, or nucleic acid sequencing of the 16S ribosomal RNA (rRNA) gene. (Koneman's Color Atlas and Textbook of Diagnostic Microbiology. Seventh edition. Edited by GW Procop, DL Church, GS Hall, et al. Philadelphia, Wolters Kluwer/Lippincott Williams and Wilkins, 2017)

**Test Definition: STL**

**Enteric Pathogens Culture, Stool**

PDF Report

No

**Day(s) and Time(s) Test Performed**

Monday through Sunday

**Analytic Time**

3 to 5 days

**Maximum Laboratory Time**

8 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 has been cleared, approved or is exempt by the U.S. 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**

87045-Enteric Pathogens Culture, Stool-with isolation and preliminary examination

87046 x 3-Stool Culture Aerobic Bacteria, each

87077-Ident by MALDI-TOF mass spec (if appropriate)

87077-Bacteria Identification (if appropriate)

87153-Aerobe Ident by Sequencing (if appropriate)

87077-Additional Identification Procedure (if appropriate)
Test Definition: STL
Enteric Pathogens Culture, Stool

87147 x 3-Serologic Agglut Method 1 Ident (if appropriate)

87147 x 4-Serologic Agglut Method 3 Ident (if appropriate)

**LOINC® Information**

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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</thead>
<tbody>
<tr>
<td>STL</td>
<td>Enteric Pathogens Culture, Stool</td>
<td>625-4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
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