

Overview

Useful For

Determining whether *Vibrio* species may be the cause of diarrhea

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

Reflex Tests

| Test Id | Reporting Name | Available Separately | Always Performed |
|---------|-------------------------------------|----------------------|------------------|
| RMALD | Ident by MALDI-TOF mass spec | No, (Bill Only) | No |
| GID | Bacteria Identification | No, (Bill Only) | No |
| ISAE | Aerobe Ident by Sequencing | No, (Bill Only) | No |
| REFID | Additional Identification Procedure | No, (Bill Only) | No |

Testing Algorithm

When this test is ordered, the reflex tests may be performed and charged separately.

Highlights

This test provides evidence of the presence of the bacterium, *Vibrio* species, in feces, in a viable state, and provides an isolate for antibacterial susceptibility testing and, if needed, submission to a health department. Minnesota health care providers are required to report all confirmed or suspected cases of *Vibrio* bacteriosis to the Minnesota Department of Health. Clients should refer to their local health departments regarding public health submission of *Vibrio* isolates.

Method Name

Conventional Culture

NY State Available

Yes

Specimen

Specimen Type

Fecal

Additional Testing Requirements

1. If susceptibility testing is desired, also order ZMMLS / Antimicrobial Susceptibility, Aerobic Bacteria, Varies. If susceptibility testing is not needed (eg, due to lack of recovery of *Vibrio* species from feces), ZMMLS will not be performed and the order will be canceled.
2. In some cases, local public health requirements may impact Mayo Clinic Laboratories (MCL) clients, requiring submission of isolates to public health laboratories. Clients should familiarize themselves with local requirements and are responsible for submitting isolates to appropriate public health laboratories. Clients can obtain isolates of *Vibrio* species recovered from specimens submitted to MCL by calling 800-533-1710 as soon as possible after reporting to ensure viability of the bacterium.

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: Culture and Sensitivity Stool Transport Vial (T058)

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.

Specimen Minimum Volume

1 mL

Reject Due To

| | |
|---|--------|
| Fecal swab Feces in Ecofix (green cap) Specimen in buffered glycerol saline transport media | Reject |
|---|--------|

Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---------------|---------------------|--------|-------------------|
| Fecal | Ambient (preferred) | 4 days | |
| | Refrigerated | 4 days | |

Clinical & Interpretive

Clinical Information

Diarrhea may be caused by a number of agents (eg, bacteria, viruses, parasites, and chemicals), and infection with or exposure to one of these agents may result in similar symptoms. A thorough patient history covering symptoms, severity and 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 determine the appropriate testing to be performed.

Vibrio cholerae, the causative agent of endemic, epidemic, and pandemic cholera, results in large volumes of rice-water stools due to the production of an enterotoxin. Severe dehydration is of concern in patients without access to adequate medical care. In the United States, *Vibrio parahaemolyticus* is the most common cause of *Vibrio* disease. *V. parahaemolyticus* is associated with the consumption of raw shellfish or fish and results in gastroenteritis with nausea, vomiting, abdominal cramps, low-grade fever, and chills. Usually, rehydration is the only treatment required, although in some cases, antimicrobial therapy is needed.

Reference Values

No growth of pathogen

Interpretation

The growth of *Vibrio* species identifies a potential cause of diarrhea.

Cautions

The yield of *Vibrio* species is reduced when specimens are delayed in transit to the laboratory (>2 hours from collection for unpreserved specimen).

Buffered glycerol saline is an unacceptable transport media for *Vibrio* culture.

Check your local public health requirements, which may require submission of isolates to a public health laboratory.

Clinical Reference

1. Pillai DR. Fecal culture for aerobic pathogens of gastroenteritis. In: Leber AL, Church DL, eds. Clinical Microbiology Procedures Handbook. 4th ed. ASM Press; 2016:Section 3.8.1
2. Mandell GL, Bennett JE, Dolin R. Principles and Practice of Infectious Disease. 6th ed. Elsevier Inc; 2005:2536-2548

Performance

Method Description

The fecal specimen is inoculated onto selective media, thiosulfate-citrate-bile salts-sucrose agar (TCBS), designed to inhibit growth of normal bowel flora while allowing growth of *Vibrio* species. After incubation, suspect colonies are identified using 1 or a combination of the following techniques: matrix-associated laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry, conventional biochemical tests, carbon source utilization, and nucleic acid sequencing of the 16S ribosomal RNA (rRNA) gene.(Tarr CL, Glover WAll, Boucher Y, et al: Chapter 43: Vibrio and

Related Organisms. In Manual of Clinical Microbiology. 12th edition. Edited by KC Carroll, MA Pfaller. Washington DC,ASM Press, 2019, pp 775-786)

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

3 to 5 days

Specimen Retention Time

7 days

Performing Laboratory Location

Rochester

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

- 87046-Vibrio culture, stool
- 87077-Identification by MALDI-TOF mass spec (if appropriate)
- 87077-Additional Identification Procedure (if appropriate)
- 87077-Bacteria Identification (if appropriate)
- 87153-Aerobe Ident by Sequencing (if appropriate)

LOINC® Information

| Test ID | Test Order Name | Order LOINC® Value |
|---------|-----------------------|--------------------|
| VIBC | Vibrio Culture, Stool | 6579-7 |

| Result ID | Test Result Name | Result LOINC® Value |
|-----------|-----------------------|---------------------|
| VIBC | Vibrio Culture, Stool | In Process |