MAYO CLINIC LABORATORIES

# Test Definition: VIBC

Vibrio Culture, Feces

## 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 at additional charge.

For more information see Laboratory Testing for Infectious Causes of Diarrhea

### 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.

### Method Name

Conventional Culture

### NY State Available

No

## Specimen

### Specimen Type

Fecal

### Additional Testing Requirements

If susceptibility testing is needed, 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), it will not be performed, and the ZMMLS order will be canceled at time of report.

### Shipping Instructions

**Specimen must arrive within 96 hours of collection.**

### Necessary Information

**Specimen source is required.**

### Specimen Required

**Patient Preparation:** Patient should **not use** barium or bismuth for 7 to 10 days before specimen collection.
**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. Within 2 hours of collection, place feces in preservative.
3. Place vial in a sealed plastic bag.

### Specimen Minimum Volume

1 mL

### Reject Due To

| | |
|---|---|
| Fecal swab | Reject |
| Feces in Ecofix (green cap) | Reject |
| 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 parahemolyticus* is the most common cause of *Vibrio* disease. *V parahemolyticus* 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.

### Clinical Reference
1. Pillai DR. Fecal culture for aerobic pathogens of gastroenteritis. In: Leber AL, Church DL, eds. Clinical Microbiology Procedures Handbook. 5th ed. ASM Press; 2023:Section 3.7.1
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, 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 mass spectrometry and conventional biochemical tests.(Tarr CL, Glover WAII, Boucher Y, et al: Vibrio and related organisms. In: Carroll KC, Pfaller MA, eds. Manual of Clinical Microbiology. 12th ed. ASM Press; 2019:775-786)

### PDF Report
No

### Day(s) Performed
Monday through Sunday

### Report Available
3 to 5 days

### Specimen Retention Time
7 days

### Performing Laboratory Location
Mayo Clinic Jacksonville Clinical Lab

## 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 | 6579-7 |