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**Lab Dept:** Microbiology

**Test Name:** ANAEROBIC CULTURE

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***General Information***

**Lab Order Codes:** ANAC

**Synonyms:** Culture, Anaerobes

**CPT Codes:** 87075 – Culture bacterial; any source, anaerobic with isolation and presumptive identification of isolates

The following testing may be added if appropriate based on findings for organism identification (multiple additions are possible if more than one organism is identified) and to aid in patient treatment management.

87076 – Anaerobic isolate, additional methods required for definitive identification of isolates

87077 – Aerobic isolate, additional methods required for definitive identification, each isolate (if appropriate)

87181 – Susceptibility studies, antimicrobial agent; agar dilution method, per agent

87185 – Enzyme detection (eg, beta lactamase), per enzyme

87186 – Susceptibility studies, microdilution or agar dilution, each multi-antimicrobial, per plate (if appropriate)

**Test Includes:** Culture and identification of fastidious anaerobes.

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***Logistics***

**Lab Testing Sections:** Microbiology

**Phone Numbers:** MIN Lab: 612-813-5866

STP Lab: 651-220-6555

**Test Availability:** Daily, 24 hours a day

**Turnaround Time:** Results are reported within 2 - 7 days.

**Special Instructions:**

**Specimen site** and **date/time of collection** are required for specimen processing.

Areas of the body containing anaerobes as a part of normal flora (stool, cervix, urethra, vagina, mouth, throat, sputum, bronchial wash, skin, voided and catheterized urine) **should not** be cultured.

Collect in a manner to avoid contamination with normal flora.

- Bartholin gland – collect by aspiration
- Endometrium – collect by aspiration, or in the operating room
- Urine – collect by supra-pubic aspiration
- Vaginal abscess – collect by aspiration
- Ear – collection of tissue or fluid or in the operating room

Anaerobic culture requests will only be performed in conjunction with an existing bacterial culture order. Please ensure that an appropriate bacterial culture order (tissue, body fluid, CSF, abscess etc.) is placed at the same time. A bacterial culture will be ordered by the lab if not received from the provider.

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**Specimen****Specimen Type:**

Normally sterile body fluid or tissue, or other material obtained from an abscess or wound

- Preferred samples for anaerobic investigations are:
  - Tissue samples obtained during surgical procedures,
  - Biopsies from tissue or bone
  - Fluid, pus or aspirates collected using a syringe.
  - Swabs samples are not recommended.

**Container:**

Sterile container, syringe or swab

Swab specimens using an Anaerobic Transport system: BD Amies Agar Gel Medium. Product number 220116. CHC # 14536

**Anaerobic transport system instructions:**

- After applicator swab is placed into the transport tube, replace the cap firmly to completely seal the tube
- Ensure correct swab is used as they look similar to other swabs. There should be gel at the bottom of the tube, not a sponge.

**Volume:**

As much aspirated specimen or tissue as possible.

**Collection:**

1. Disinfect skin surface with 70% alcohol. Allow to dry.
2. Aspirate specimen directly into the syringe. Remove air from syringe.
4. If unable to aspirate, obtain a swab from deep in the wound, firmly sampling the lesion's advancing edge. Place swab into anaerobic transport tube.

**Transport/Storage:**

**Onsite collections:** Transport to the laboratory immediately at room temperature. **Do not refrigerate.** Refrigeration inhibits the viability of certain anaerobic organisms. **Do not** transport through the pneumatic tube.

**Offsite collections:** Specimens must be promptly transported to the laboratory, with the next available courier, not to exceed 24 hours from the time of collection.

**Special Processing:** Refrigeration inhibits the viability of certain anaerobic organisms.

**Sample Rejection:** Specimens from sites in which anaerobic bacteria are normal flora (e.g., throat, rectal swabs, urine, bronch washes, cervico-vaginal mucosal swabs, sputum) are unacceptable for anaerobic culture; improperly labeled specimen; specimens with prolonged transit time (see [Transport/Storage](#) for requirements). Swab specimen not submitted in anaerobic transport media; swab specimens with cap not securely sealed, insufficient volume; external contamination. If an unacceptable specimen is received, the physician or patient's nurse will be notified before discarding.

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## ***Interpretive***

**Reference Range:** No growth of anaerobic bacteria.

**Limitations:** In open wounds, anaerobic organisms may play an essential role, whereas aerobes may represent surface contamination. Serious anaerobic infections are often due to mixed flora, which are pathogenic synergists. The *Bacteroides fragilis* group is the most common anaerobic isolate and the most antibiotic resistant. Susceptibility testing will be performed if requested.

**Methodology:** Anaerobic culture

## **References:**

Cook, JH, and M Pezzlo (1992). Specimen receipt and accessioning. Section 1. Aerobic bacteriology, 1.2.1-4. In HD Isenberg (ed) Clinical Microbiology Procedures Handbook. American Society for Microbiology, Washington DC

Miller, J Michael (1999) A Guide to Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC

Miller, J Michael, and HT Holmes (1999) Specimen Collection, Transport, and Storage in PR Murray et al, (ed), Manual of Clinical Microbiology, 7<sup>th</sup> edition, American Society for Microbiology, Washington DC, pp 33-104

**Updates:**

3/23/2010: CPT Updates

3/7/2011: CPT Updates

11/10/2014: Added offsite collections.

10/26/2018: Updated name and updated containers

July 2024: Updated swab collection device