Anaerobic Bacteria Supplemental Information

Anaerobic bacteria are a frequent cause of serious infections. The Bacteriology Section generally accepts only pure isolates for identification. In certain cases, clinical material for primary isolation is accepted for cultivation of pathogenic microorganisms. Contact the Bacteriology Section regarding submission of these specimens.

Isolation and identification techniques used include cultural procedures, morphological and biochemical characterization. Anaerobic isolates are not tested for antimicrobial susceptibilities.

Specimen Collection

Since anaerobic organisms make up a major part of the body's indigenous flora, clinical specimens for anaerobic culture must be collected by methods that avoid contamination with normal flora. Aspirates collected with a syringe or tissue specimens are recommended for anaerobic culture.

The Bacteriology Laboratory accepts anaerobic organisms isolated from the following sources:

- Aspirated pus.
- Tissue (biopsy, surgery, autopsy).
- Transtracheal aspirates.
- Direct lung aspirates.
- Body fluids.
- Sulfur granules from suspected cases of actinomycosis.

Anaerobic organisms isolated from the sources listed below are unacceptable for testing. If you submit an isolate from one of these sources, include information that establishes its clinical significance.

- Throat, gingival or nasopharyngeal swabs.
- Skin.
- Voided urine.
- Sputum or gastric contents.
- Superficial wounds.
- Rectal swabs, feces or small bowel contents (except for special testing).
- Vaginal or cervical swabs

The culture must be maintained in an anaerobic environment. Submit a PURE, actively growing culture.

Specimen Identification

1. Complete all the provider and patient information areas. Include pertinent clinical, biochemical, and epidemiological information with each specimen.

2. Label each specimen with the date of collection and the patient's first and last name. Unlabeled specimens or specimens where the patient identifier on the specimen does not match the identifier on the form will not be tested.

Note: Specimens submitted on plates are acceptable only if they are properly closed in an anaerobic transport bag and delivered by courier to the laboratory.

Reporting Procedures and Interpretation of Results

Most anaerobic cultures are reported within 7 working days. However, fastidious, slow growing, nutritionally deficient organisms or mixed cultures may require several additional days longer to complete. Reports on cultures forwarded to CDC for further identification and/or confirmation may be delayed several months due to high volume workload.

Organisms are identified to genus, species, and subspecies level when appropriate and only if culture, morphology, and biochemical test results support the identification. Genus, species and subspecies designations are consistent with designations in the American Society for *Microbiology's Manual of Clinical Microbiology,* and the *International* Code of *Nomenclature of Bacteria.* Some anaerobes, particularly members of the genus Clostridium and many of the non-sporeforming gram-positive rods can be identified only to the genus level. Generally, *Lactobacillus* organisms are identified only to the genus level.

Criteria for Unacceptable Specimens

1. The specimen was not labeled.
2. The patient identifier on the specimen did not match the identifier on the form.
3. The specimen was broken or leaked in transit.
4. The type of specimen was an improper specimen type for anaerobic culture.
5. The specimen was not submitted under proper anaerobic conditions.
6. The transport media was unsatisfactory for anaerobic transport.
7. The specimen was non-viable.
8. A mixed specimen was submitted.
9. The specimen did not arrive under proper transport conditions. (2-25°C)