

Overview

Useful For

Supporting the diagnosis of bacterial vaginosis

Method Name

Conventional Gram Stain Procedure and Nugent Scoring System

NY State Available

Yes

Specimen

Specimen Type

Varies

Specimen Required

Preferred:

Specimen Type: Vaginal swab

Collection Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium: T092) or ESwab

Specimen Volume: Entire collection

Specimen Stability Information:

ESwab: Refrigerated (preferred) 7 days/Ambient 7 days

Culture Transport Swab: Ambient (preferred) 24 hours/Refrigerated 24 hours

Acceptable:

Specimen Type: Prepared microscope slide

Source: Vaginal swab

Collection Container/Tube: [Culturette swab \(Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium: T092\) or ESwab](#)

Submission Container/Tube: Slide container

Specimen Volume: Slide

Collection Instructions: Apply original sample to surface of standard microscope slide using appropriate application method (determined by consistency of specimen type) to assure adequate transfer of specimen onto slide. Allow specimen to dry and then heat-fix the slide. Place in slide container for transport.

Forms

[If not ordering electronically, complete, print, and send a Microbiology Test Request \(T244\)](#) with the specimen.

Reject Due To

Other Dry swab

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Varies	Varies (preferred)		

Clinical & Interpretive

Clinical Information

Bacterial vaginosis is so-named because bacteria are the cause and an associated inflammatory response is lacking. It results in an increase in thin, gray, homogeneous vaginal discharge and vaginal malodor and is caused by a change in the vaginal flora. Bacterial vaginosis is a synergistic polymicrobial infection not caused by a specific organism. The standard scoring system termed the "Nugent score" is a technique for assessing bacterial vaginosis using microscopic examination of a Gram-stained smear of vaginal discharge.

Reference Values

One of the 3 following reports dependent on the weighted sum balance of *Lactobacillus*, *Gardnerella/Bacteroides*, and *Mobiluncus* species:

1. Consistent with normal bacterial vaginal flora.
2. Altered vaginal flora not consistent with bacterial vaginosis. This frequently represents a transitional stage. If signs or symptoms persist, repeat testing is warranted.
3. Consistent with bacterial vaginosis.

Interpretation

Assessment of a Gram-stained slide using the Nugent score has replaced culture as the preferred test to diagnose bacterial vaginosis.(1) While *Gardnerella* is the most common anaerobe found in bacterial vaginosis, other anaerobic organisms are often present along with a decrease in the amount of "usual flora" (eg, *Lactobacillus* species).

This system uses a 0- to 4-point scale to calculate the weighted sum of the following 3 bacterial morphotypes: *Lactobacillus*, *Gardnerella/Bacteroides*, and *Mobiluncus* species. A total score of greater than 6 is considered abnormal, a total score of 4 to 6 is considered a transitional stage, and a total score of 0 to 3 is considered normal. Clue cells and yeast are also reported, if present.

Cautions

This scored Gram stain for diagnosis of bacterial vaginosis should be used only for women in childbearing years or postmenopausal women on estrogen replacement therapy.

Clinical Reference

CAP Microbiology checklist: Bacterial Vaginosis-Evaluation of a criterion-based Gram stain is used for the microscopic diagnosis of bacterial vaginosis. 2011

Performance

Method Description

A Gram stain with scoring of the microbial morphotypes, the Nugent scoring system, is used to evaluate the vaginal flora from the Gram-stained slide. This system uses a 0- to 4-point scale to calculate the weighted sum of the following 3 bacterial morphotypes: *Lactobacillus*, *Gardnerella/Bacteroides*, and *Mobiluncus* species.(Chan WW: Gram stain

procedure-Reporting Gram-stained vaginal smears to diagnose bacterial vaginosis and vaginitis. [In Clinical Microbiology Procedures Handbook](#). Fourth edition. Edited by AL Leber. ASM Press, Washington DC, 2016 Section 3.2.1-3)

PDF Report

No

Specimen Retention Time

Gram Stained slides are retained for 7 days

Performing Laboratory Location

Rochester

Fees & Codes**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

87205