



# Comprehensive Clostridium Culture



LAB #: F000000-0000-0  
 PATIENT: Sample Patient  
 ID: P000000000  
 SEX: Female  
 AGE: 57

CLIENT #: 12345  
 DOCTOR:  
 Doctor's Data, Inc.  
 3755 Illinois Ave.  
 St. Charles, IL 60174

## Comprehensive Clostridium Culture; stool

CLOSTRIDIUM CULTURE	
<b>Commensal Bacteria</b> 1+ C. bifermentans 1+ C. clostridioforme 2+ C. hathewayi 2+ C. limosum 1+ C. perfringens 2+ C. sordellii  <div style="text-align: center; color: red;">  <p>Acceptable and 'normal' clostridium species</p> </div>	<b>Pathogenic Bacteria</b> 1+ C. difficile  <div style="text-align: center; color: red;">  <p>Confirmed pathogenic species - (treatment to be based on levels and symptoms)</p> <p>*Consult professional treatment protocols for these organisms</p> </div>

### INFORMATION

This test evaluates the presence and abundance of species of intestinal bacteria that are included in the *Clostridium* genus. The bacteria and their spores, derived from a stool specimen, have been cultured under very specific anaerobic conditions optimally suited for the growth of *Clostridium*. If non-pathogenic species are detected they are reported under the category of commensal and, their extent of growth in culture is reported as 1+ to 4+ (1+ being the least). If present in culture, the species that are well established to cause disease will be reported as pathogenic and be quantified as 1+ to 4+. If pathogenic *Clostridium difficile*, the most common cause of antibiotic associated diarrhea, is present in culture at any level additional testing will be performed to determine if the patient's bacteria are producing the specific toxins A and B (direct immunoassay on the cultured bacteria). If clinically significant species are identified a descriptive paragraph will be provided to facilitate interpretation of the test results.

Clostridia are anaerobic gram-positive bacteria that produce very durable spores as a means of proliferation; the spores are extremely resistance to antibiotics, heat, drying and disinfectants. When cultured under very specific anaerobic conditions optimized for growth of *Clostridium* species, the spores germinate to metabolically active bacteria that can be sub-cultured for positive identification (speciation).

*Clostridium* is a genus of bacteria that includes over one hundred distinct species, many of which are abundant and normal inhabitants (commensal) of the human gastrointestinal tract (GIT). Most of the *Clostridium* species are not virulent and can even have beneficial effects on health and integrity of the GIT in part by breakdown of polysaccharides and fermentation of carbohydrates to short chain fatty acids. However a few species are well-established opportunistic pathogens that produce specific toxins that cause diseases such as food-borne illnesses and, antibiotic-associated diarrhea and pseudomembranous colitis. Some species of *Clostridium* have been associated with neurological disorders and are the subject of ongoing research. Due to the biodiversity within the *Clostridium* genus it may be helpful to identify the prevalence of specific *Clostridium* species that are transiently or permanently present in the GIT of symptomatic patients.

#### References:

Handbook on Clostridia edited by P Durre. (2005) CRC Press  
 Washington W, Allen S, Janda W et al. Koneman's Color Atlas and Textbook of Diagnostic Microbiology, 6<sup>th</sup> edition. Lippincott Williams and Wilkins; 2006, pp. 931-939  
 Clostridia. Louisiana Office of Public Health-Infectious Disease Epidemiology Section (2006)  
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 Parracho HMRT, Bingham MO, Gibson G et al. Differences between the gut microflora of children with autism spectrum disorders and that of healthy children. J Med Microbiol (2005)54:987-91  
 Song Y, Chengxu L and Finegold M. Real-time PCR quantitation of clostridia in feces of autistic children. Appl Environ Microbiol (2004)70:6459-65

Comments: Toxin testing performed for C. difficile, see C. difficile DNA report.  
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