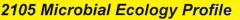


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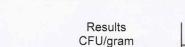
Ordering Physician:

Forrest Health Center Steven Forrest DC 430 Monterrey Avenue Suite 2 Los Gatos, CA 95030 Wellcome May 29, 2012



Methodology: DNA Analysis, GC/MS, Microscopic, Colorimetric, Automated Chemistry, ELISA

Consistency = Formed/Normal





Predominant Bacteria E+007 E+007 2012 Feb = 9 Balance 2012 Obligate anaerobes 2012 May 1.6 Bacteroides sp. 2.9 feb Bet 3.4 >= 1.3 6.2 1.5 Clostridia sp. 3.8 >= 1.0 1.6 6.2 Prevotella sp. 2.0 2.0 7.4 1.6 Fusobacteria sp. 2.0 2.0 1.6 5.8 Streptomyces sp. 2.0 1.3 >= 1.0 6.2 Mycoplasma sp. 7.7 1.8 >= 12 Facultative anaerobes 7.8 Lactobacillus sp. 5.3 5.2 2.8 Worse >= 1.2 2.3 7.6 Bifidobacter sp. 2.5 3.0 4.3 >= 1.8 Obligate aerobes Escherichia coli (E. coli) 2.5

### Units and Reference Ranges

Organisms are detected by DNA analysis. One colony forming unit (CFU) is equivalent to one bacterium. Each genome detected represents one cell, or one CFU. Results are expressed in scientific notation, so an organism reported as 2.5 E7 CFU/gram is read as 25 million colony forming units per gram of feces. The cutoff for significance of Opportunistic Bacteria has been set at 1.0E+ 005 (100,000). These are levels above which clinically significant growth may be present. Rather than reporting semi-quantitative +1 to +4 levels, the new methodology provides full quantitative analysis.

Predominant Bacteria play major roles in health. They provide colonization resistance against potentially pathogenic organisms, aid in digestion and absorption, produce vitamins and SCFA's, and stimulate the GI immune system. DNA probes allow detection of multiple species (sp.) within a genus, so the genera that are reported cover many species.

# Opportunistic Bacteria

No clinically significant amounts.

Opportunistic Bacteria may cause symptoms and be associated with disease. They can affect digestion and absorption, nutrient production, pH and immune state. Antibiotic sensitivity tests will be performed on all opportunistic bacteria found, although clinical history is usually considered to determine treatment since the organisms are not generally considered to be pathogens.



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2105 Microbial Ecology Profile		Method	Methodology: DNA Analysis, GC/MS, Microscopic, Colorimetric, Automated Chemistry, ELISA		
Pathogenic Bacteria		35% Reference Range			
Helicobacter pylori	<0.01	<=1.0E+005			
E. coli 0157:H7	<0.01	<=1.0E+005			
Clostridium difficile	<0.01	<=1.0E+005			
Campylobacter sp.	<0.01	<=1.0E+005			
Yeast/Fungi		Expected Value	Yeast/Fungi Yeast overgrowth has been linked to many		
No clinically significant amounts.			chronic conditions, in part because of antigenic		

Yeast overgrowth has been linked to many chronic conditions, in part because of antigenic responses in some patients to even low rates of yeast growth. Potential symptoms include diarrhea, headache, bloating, atopic dermatitis, and fatigue. Positives are reported as +1, +2, +3 or +4 indicating >100, >1000, >10000 or >100000 pg DNA/g.

#### Expected **Parasites** Value Parasite present; taxonomy unavailable. **Positive** Neg

A taxonomy unavailable finding likely indicates an ingested protozoan and not a human parasite. It does not indicate treatment unless patient symptoms and other inflammatory markers are consistent with parasite infection.

Adiposity Inde	ex				
Firmicutes		60	+	•	+ <= 80
Bacteroidetes	12	40	1	•	<del></del>

Drug Resistance Genes					
aacA, aphD	Neg	gyrB, ParE	Neg		
mecA	Neg	PBP1a, 2B	Neg		
vanA, B, and C	Neg				

## **Parasites**

Parasite infections are a major cause of non-viral diarrhea. Symptoms may include constipation, gas, bloating, increased allergy response, colitis, nausea, and distention.

The Adiposity Index is derived by using DNA probes that detect multiple genera of the phyla Firmicutes and Bacteroidetes. Abnormalities of these phyla may be associated with increased caloric extraction from food.

### **Drug Resistance Genes**

aacA, aphD - Gentamycin, Kanamycin, and Tobramycin mecA - Methicillin

VanA, vanB, vanC - Vancomycin and Teicoplanin

GyrB, ParE - Ciprofoxacin and later quinolones PBP1a, PBP2B - Penicillin

Decisions involving diagnosis and treatment are the responsibility of the clinician.

Georgia Lab Lic. Code #067-007 CLIA ID# 11D0255349

New York Clinical Lab PFI #4578 Florida Clinical Lab Lic. #800008124

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**Laboratory Directors** J. Alexander Bralley, PhD Robert M. David, PhD