

Wellcome

Date collected 7-30-2012

Date reported 8-13-2012

Previous test: 5-29-2012

Ordering Physician:

Direct Lab Services-Mandeville

Anna Davis MD

4040 Florida Street

Suite 202

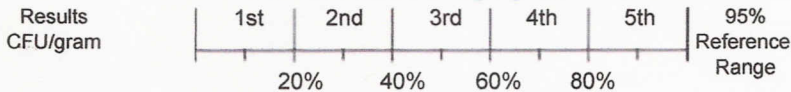
Mandeville, LA 70448

2105 Microbial Ecology Profile

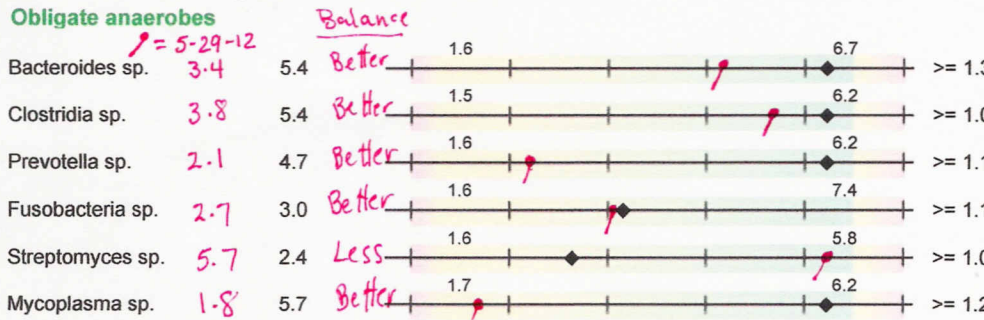
Methodology: DNA Analysis, GC/MS, Microscopic, Colorimetric, Automated Chemistry, ELISA

Percentile Ranking by Quintile

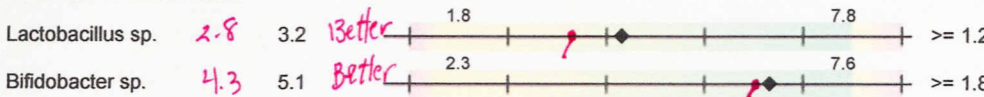
Consistency = Formed/Normal



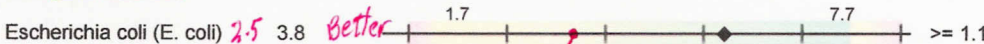
Predominant Bacteria E+007



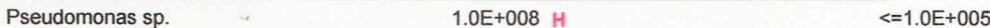
Facultative anaerobes



Obligate aerobes



Opportunistic Bacteria



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

Pathogenic Bacteria

95%

Reference

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

No clinically significant amounts.

Yeast/Fungi

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.

Parasites

Expected Value

No Ova or Parasites

Parasites

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

Adiposity Index

Firmicutes	59	+	+	<= 80
Bacteroidetes	41	+	+	>= 20

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	Neg	gyrB, ParE	Pos
mecA	Neg	PBP1a, 2B	Neg
vanA, B, and C	Pos		

Drug Resistance Genes

aacA, aphD - Gentamycin, Kanamycin, and Tobramycin
 mecA - Methicillin
 VanA, vanB, vanC - Vancomycin and Teicoplanin
 GyrB, ParE - Ciprofloxacin and later quinolones
 PBP1a, PBP2B - Penicillin

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

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2150 Sensitivity - Bacteria

Methodology: DNA Analysis, ELISA

Pharmaceuticals	Sensitive	Resistant
Amoxicillin		R
Ampicillin		R
Cefuroxime	S	
Ciprofloxacin	S	
Clindamycin	S	
Erythromycin	S	
Levofloxacin	S	
Potassium Clavula		R
Rifaximin	S	
Sulfamethoxazole	S	
Tetracyclin	S	
Trimethoprim-Sulfa	S	

Bacterial growth suppression is measured in a liquid growth medium where fungal growth is suppressed and specific antibacterial agents are introduced before incubation. In contrast to the older isolation and culture techniques, such universal culturing more closely approximates the actions of antibacterials in the complex milieu of the colon.

Agents marked as "**Sensitive**" cause effective bacterial growth suppression. Those antibacterial agents are candidates for suppressing the growth of bacteria in the patient's colon. The results apply to all organisms reported under "**Opportunistic Bacteria**".

Agents indicated as "**Resistant**" have low effectiveness. If all tested agents are resistant, synergistic mixtures of antibacterial agents may be effective. Agents indicated as "**Resistant**" have low effectiveness. If all tested agents are resistant, synergistic mixtures of antibacterial agents may be effective.

Botanicals	Sensitive	Resistant
5-Hydroxy-1,4-naphthoquinone Black Walnut	S	
Alliin Garlic		R
Arbutin Uva Ursi		R
Artemisinin Wormwood	S	
Berberine Goldenseal	S	
Caprylic acid Octanoic acid	S	
Carvacrol Oregano	S	
Oleuropein Olive Leaf	S	
Quinic Acid Cats Claw	S	
Thymol Oil of Thyme	S	
Undecylenic acid Undecylenic acid	S	

For Botanical sensitivity testing the active ingredients are tested and an example of the available source is shown.

Sensitivities are not performed on "**Pathogens**" or "**Parasites**" because they do not grow in culture under normal laboratory conditions. Standard protocols are generally used for treatment of pathogens and parasites.