

Ordering Physician:
 Institute of Alternative Medicine
 Brian Hardy DC,LAc,CCN,DACBN
 301 North 200 East
 Suite 1 - C
 St. George, UT 84770

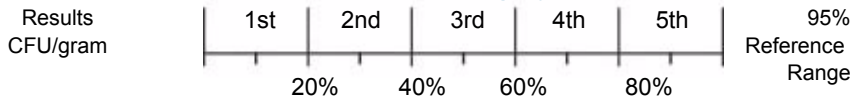
Accession Number:
 Reference Number:
 Patient:
 Age: 57 Sex: Male
 Date of Birth:
 Date Collected: 10/19/11
 Date Received: 10/24/11
 Report Date: 11/7/11
 Telephone:
 Fax:
 Reprinted:
 Comment:

Gastrointestinal Function Profile

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

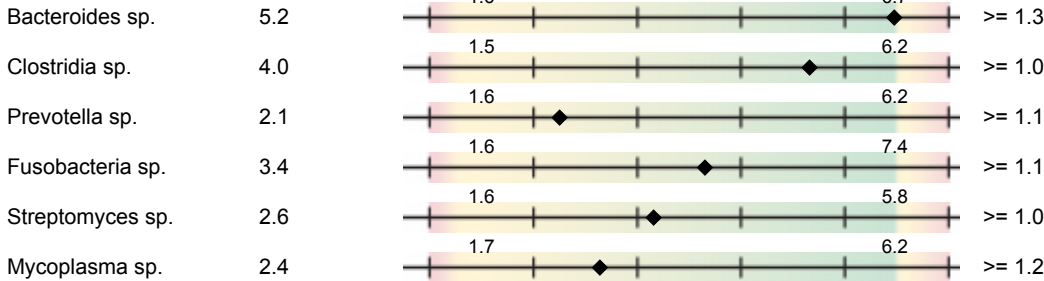
Percentile Ranking by Quintile

Consistency = Formed/Normal

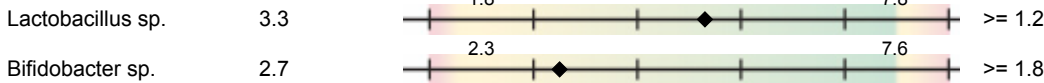


Predominant Bacteria (E+007)

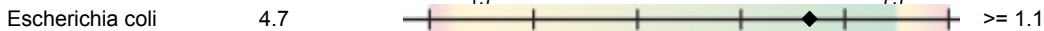
Obligate anaerobes



Facultative anaerobes



Obligate aerobes



Opportunistic Bacteria

No clinically significant amounts.

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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Pathogenic Bacteria

95% Reference Range

Helicobacter pylori	<0.01	<=1.0E+005
E.H.E. coli	<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
Neg


Parasite present; taxonomy unavailable. **Positive**

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.

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	63		<= 80
Bacteroidetes	37		>= 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	Neg
mecA	Neg	PBP1a, 2B	Neg
vanA, B, and C	Neg		

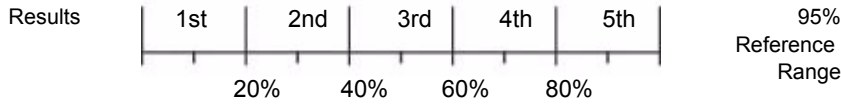
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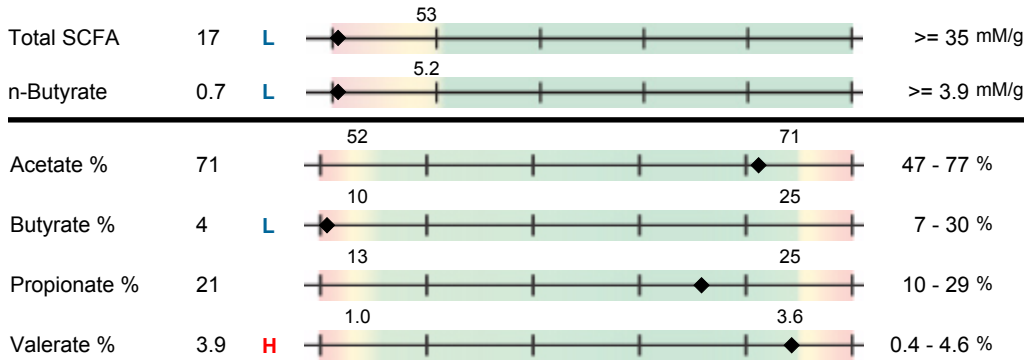
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Percentile Ranking by Quintile



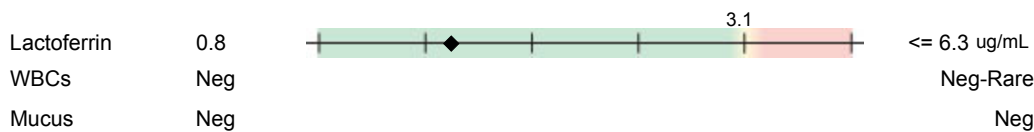
Beneficial SCFA



Beneficial SCFA

Short chain fatty acids (SCFA) are produced by bacterial fermentation of dietary polysaccharides and fiber. The product, N-butyrate, is taken up and used to sustain the normal activity of colonic epithelial cells. Butyrate has been shown to lower the risk of colitis and colorectal cancer. A healthy balance of GI microbes depends on production of SCFA by one specie to allow the normal growth of another one in a complex cross-feeding network.

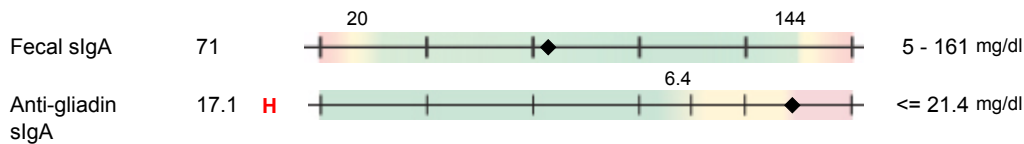
Inflammation



Inflammation

Lactoferrin, an iron-binding glycoprotein, is released in IBD but not in non-inflammatory IBS. High levels are found in Crohn's, UC or infection. WBC's are elevated in general inflammation/infection. Mucus is often visualized in acute GI inflammation.

Immunology



Immunology

High fecal slgA indicates immune system reactions to the presence of antigens from bacteria, yeast or other microbes. Low slgA can result from stress or malnutrition. Anti-gliadin slgA is a screening marker for gluten sensitivity.

