

Patient: **SAMPLE
PATIENT**

DOB:

Sex:

MRN:

2300 Microbiology Analysis Profile - Stool

Gastrointestinal Microbiome

Human microflora is influenced by environmental factors and the competitive ecosystem of the organisms in the GI tract. Pathogenic significance should be based upon clinical symptoms.

| Microbiology Legend | | | |
|------------------------|---------------------------|---------------------------------|----------------------|
| NG No Growth | NP Non-Pathogen | PP Potential Pathogen | P Pathogen |

Additional Bacteria

Non-Pathogen: Organisms that fall under this category are those that constitute normal, commensal flora, or have not been recognized as etiological agents of disease.

Potential Pathogen: Organisms that fall under this category are considered potential or opportunistic pathogens when present in heavy growth.

Pathogen: The organisms that fall under this category have a well-recognized mechanism of pathogenicity in clinical literature and are considered significant regardless of the quantity that appears in the culture.

Bacteriology (Culture)

Lactobacillus spp.

2+ NP

Escherichia coli

4+ NP

Bifidobacterium

2+ NP



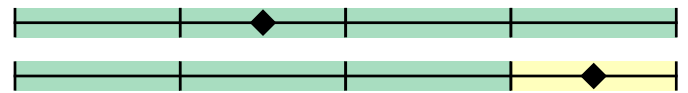
Additional Bacteria

alpha haemolytic Streptococcus

2+ NP

Citrobacter freundii

4+ PP



Mycology (Culture)

Yeast, not Candida albicans

1+ NP





Additional Results (if ordered)

| | Inside | Outside | Reference Range |
|---|-------------|---------|-----------------|
| Campylobacter specific antigen | Not Ordered | | Negative |
| Enterohemorrhagic Escherichia coli Shiga-like Toxin | Not Ordered | | Negative |

Commentary

Methodology: MALDI-TOF MS, Automated and Manual Biochemical Methods, Vitek 2® System Microbial identification and Antibiotic susceptibility, ELISA and EIA.

Commentary is provided to the practitioner for educational purposes, and should not be interpreted as diagnostic or as treatment recommendations. Diagnosis and treatment decisions are the practitioner's responsibility.

Sufficient amounts of Lactobacilli and E. coli appear to be present in the stool. Ample amounts of E. coli have been associated with a balanced gut flora. The "friendly bacteria", Lactobacilli and Bifidobacteria, are important for gastrointestinal function, as they are involved in vitamin synthesis, natural antibiotic production, immune defense, digestion, detoxification of pro-carcinogens and a host of other activities. Supplementation with Lactobacilli might be considered in selected cases where the organisms are in the low range of normal. Bifidobacteria is below optimal levels. Ideally, levels of Lactobacillus and E. coli should be 2+ or greater. Bifidobacteria being a predominate anaerobe should be recovered at levels of 4+.

Citrobacter freundii has occasionally been implicated in diarrheal disease. This organism is commonly found in the environment and may be spread by person-to-person contact. Isolated from water, fish, animals and food. Citrobacter freundii is considered an opportunistic pathogen, and therefore can be found in the gut as part of normal flora.

A 1+ quantity of yeast is considered an acceptable amount of yeast in the stool. However, it may, reflect a condition of yeast overgrowth, especially if paired with a microscopic observation of moderate to many yeast. A 1+ growth quantity of yeast also may lead to symptoms in individuals with dysbiosis.



Bacteria Sensitivity

Prescriptive Agents

| <i>Citrobacter freundii</i> | R | I | S-DD | S | NI |
|-----------------------------|---|---|------|---|----|
| Ampicillin | R | | | | |
| Amox./Clavulanic Acid | R | | | | |
| Cephalothin | R | | | | |
| Ciprofloxacin | | | | S | |
| Tetracycline | | | | S | |
| Trimethoprim/Sulfa | | | | S | |

Natural Agents

| <i>Citrobacter freundii</i> | LOW INHIBITION | HIGH INHIBITION |
|-----------------------------|----------------|-----------------|
| Berberine | | |
| Oregano | | |
| Plant Tannins | | |
| Uva-Ursi | | |

Prescriptive Agents:

The R (Resistant) category implies isolate is not inhibited by obtainable levels of pharmaceutical agent.

The I (Intermediate) category includes isolates for which the minimum inhibition concentration (MIC) values usually approach obtainable pharmaceutical agent levels and for which response rates may be lower than for susceptible isolates.

The S-DD (Susceptible-Dose Dependent) category implies clinical efficacy when higher than normal dosage of a drug can be used and maximal concentration achieved.

The S (Susceptible) column implies that isolates are inhibited by the usually achievable concentrations of the pharmaceutical agent.

NI (No Interpretive guidelines established) category is used for organisms that currently do not have established guidelines for MIC interpretation.

Refer to published pharmaceutical guidelines for appropriate dosage therapy.

Natural Agents:

In this assay, inhibition is defined as the reduction level on organism growth as a direct result of inhibition by a substance. The level of inhibition is an indicator of how effective the substance was at limiting the growth of an organism in an in vitro environment. High inhibition indicates a greater ability by the substance to limit growth, while Low Inhibition a lesser ability to limit growth. The designated natural products should be considered investigational in nature and not be viewed as standard clinical treatment substances.