ORDER: 999999-9999
PATIENT: Sample Patient
ID: 999999
SEX: Female
AGE: 39 DOB: 01/01/1983

CLIENT #: 999999
DOCTOR: Sample Doctor MD
Doctors Data Inc
123 Main St.
St. Charles, IL 60174 USA

Stool Chemistries

DIGESTION / ABSORPTION

	WITHIN	OUTSIDE	REFERENCE INTERVAL
Elastase	>500		> 200 µg/g
Fat Stain	None		None – Moderate
Muscle fibers	None		None – Rare
Vegetable fibers	Rare		None – Few
Carbohydrates†	Negative		Negative

Elastase findings can be used for assessing pancreatic exocrine function and insufficiency.
Fat Stain: Microscopic determination of fecal fat using Sudan IV staining is a qualitative procedure utilized to assess fat absorption and to detect steatorrhea.
Muscle fibers in the stool are an indicator of incomplete digestion. Bloating, flatulence, feelings of "fullness" may be associated with increase in muscle fibers.
Vegetable fibers in the stool may be indicative of inadequate chewing, or eating "on the run".
Carbohydrates: The presence of reducing substances in stool specimens can indicate carbohydrate malabsorption.

INFLAMMATION

	WITHIN	OUTSIDE	REFERENCE INTERVAL
Lactoferrin	<0.5		< 7.3 µg/mL
Calprotectin	<10		< 80 µg/g
Lysozyme*	163		≤ 500 ng/mL
White Blood Cells	None		None – Rare
Mucus	Negative		Negative

Lactoferrin and **Calprotectin** are reliable markers for differentiating organic inflammation (IBD) from function symptoms (IBS) and for management of IBD. Monitoring levels of fecal lactoferrin and calprotectin can play an essential role in determining the effectiveness of therapy, are good predictors of IBD remission, and can indicate a low risk of relapse.
Lysozyme is an enzyme secreted at the site of inflammation in the GI tract and elevated levels have been identified in IBD patients.
White Blood Cells (WBC) and **Mucus** in the stool can occur with bacterial and parasitic infections, with mucosal irritation, and inflammatory bowel diseases such as Crohn's disease or ulcerative colitis

IMMUNOLOGY

	WITHIN	OUTSIDE	REFERENCE INTERVAL
Secretory IgA*		12.0	30 – 275 mg/dL

Secretory IgA (sIgA) is secreted by mucosal tissue and represents the first line of defense of the GI mucosa and is central to the normal function of the GI tract as an immune barrier. Elevated levels of sIgA have been associated with an upregulated immune response.

SPECIMEN DATA

Comments: Multiple parasites seen, advise Px3.
Date Collected: 07/31/2023
Date Received: 08/03/2023
Date Reported: 08/09/2023
Methodology: Turbidimetric immunoassay, Microscopy, Colormetric, Elisa, Macroscopic Observation

*This test was developed and its performance characteristics determined by Doctor's Data Laboratories in a manner consistent with CLIA requirements. The U. S. Food and Drug Administration (FDA) has not approved or cleared this test; however, FDA clearance is not currently required for clinical use. The results are not intended to be used as a sole means for clinical diagnosis or patient management decisions.

†This test has been modified from the manufacturer's instructions and its performance characteristics determined by Doctor's Data Laboratories in a manner consistent with CLIA requirements.

ORDER: 999999-9999
PATIENT: Sample Patient
ID: 999999
SEX: Female
AGE: 39 DOB: 01/01/1983

CLIENT #: 999999
DOCTOR: Sample Doctor MD
Doctors Data Inc
123 Main St.
St. Charles, IL 60174 USA

Stool Chemistries

SHORT CHAIN FATTY ACIDS

	WITHIN	OUTSIDE	REFERENCE INTERVAL
% Acetate‡	59		50 – 72 %
% Propionate‡	19		11 – 25 %
% Butyrate‡	18		11 – 32 %
% Valerate‡	3.7		0.8 – 5.0 %
Butyrate‡	1.4		0.8 – 4.0 mg/mL
Total SCFA's‡	7.8		5.0 – 16.0 mg/mL

Short chain fatty acids (SCFAs): SCFAs are the end product of the bacterial fermentation process of dietary fiber by beneficial flora in the gut and play an important role in the health of the GI as well as protecting against intestinal dysbiosis. Lactobacilli and bifidobacteria produce large amounts of short chain fatty acids, which decrease the pH of the intestines and therefore make the environment unsuitable for pathogens, including bacteria and yeast. Studies have shown that SCFAs have numerous implications in maintaining gut physiology. SCFAs decrease inflammation, stimulate healing, and contribute to normal cell metabolism and differentiation. Levels of **Butyrate** and **Total SCFA** in mg/mL are important for assessing overall SCFA production, and are reflective of beneficial flora levels and/or adequate fiber intake.

INTESTINAL HEALTH MARKERS

	WITHIN	OUTSIDE	REFERENCE INTERVAL
Red Blood Cells	None		None – Rare
pH	6.0		5.8 – 7.0
Occult Blood	Negative		Negative

Red Blood Cells (RBC) in the stool may be associated with a parasitic or bacterial infection, or an inflammatory bowel condition such as ulcerative colitis. Colorectal cancer, anal fistulas, and hemorrhoids should also be ruled out.
pH: Fecal pH is largely dependent on the fermentation of fiber by the beneficial flora of the gut.
Occult blood: A positive occult blood indicates the presence of free hemoglobin found in the stool, which is released when red blood cells are lysed.

MACROSCOPIC APPEARANCE

	WITHIN	OUTSIDE	EXPECTED
Color	Brown		Brown
Consistency	Soft		Soft

Color: Stool is normally brown because of pigments formed by bacteria acting on bile introduced into the digestive system from the liver. While certain conditions can cause changes in stool color, many changes are harmless and are caused by pigments in foods or dietary supplements.
Consistency: Stool normally contains about 75% water and ideally should be formed and soft. Stool consistency can vary based upon transit time and water absorption.

SPECIMEN DATA

Comments:
Date Collected: 07/31/2023
Date Received: 08/03/2023
Date Reported: 08/09/2023
Methodology: Gas Chromotography, ph Electrode, Guaiac, Macroscopic Observation

‡This test was developed and its performance characteristics determined by Doctor's Data Laboratories in a manner consistent with CLIA requirements. The U.S. Food and Drug Administration (FDA) has not approved or cleared this test; however, FDA clearance is not currently required for clinical use.

Introduction

This analysis of the stool specimen provides fundamental information about the overall gastrointestinal health of the patient. When abnormal microflora or significant aberrations in intestinal health markers are detected, specific commentaries are presented. If no significant abnormalities are found, commentaries are not presented.

Stool Chemistries

Secretory IgA (sIgA) Low

The concentration of sIgA is abnormally low in this fecal specimen. Secretory IgA represents the first line of defense of the gastrointestinal (GI) mucosa and is central to the normal function of the GI tract as an immune barrier. Immunological activity in the gastrointestinal tract can be accessed via fecal sIgA levels in a formed stool sample. However, sIgA may be artefactually low due to fluid dilution effects in a watery or loose/watery stool sample.

Chronic mental and physical stress as well as inadequate nutrition have been associated with low fecal sIgA concentrations. This includes dietary restrictions, excessive alcohol intake, body mass loss, negative moods, and anxiety. One study found decreased levels of sIgA in malnourished children, particularly protein malnourishment, which responded well to nutritional rehabilitation with a significant increase in sIgA. A possible explanation for this may be the synthesis and expression of sIgA requires adequate intake of the amino acid L-glutamine. An increase of dietary L-glutamine may restore GI immune function by protection of cells that synthesize sIgA. *Saccharomyces boulardii* is a nonpathogenic yeast that has been used for the treatment of acute infectious enteritis and antibiotic-associated diarrhea. Restored levels of sIgA and subsequent enhanced host immune response have been found following *S. boulardii* administration (animal models). With low sIgA one might consider a salivary cortisol test.