



Comprehensive Digestive Stool Analysis 2.0

The **Comprehensive Digestive Stool Analysis 2.0** (CDSA 2.0) is the most advanced non-invasive evaluation of specific gastrointestinal imbalances. In addition to identifying general dysfunction, this assay provides direct measures to pinpoint the diagnosis and treatment of patients with many digestive conditions such as Irritable Bowel Syndrome (IBS) and Inflammatory Bowel Disease (IBD).

Digestive complaints are among the most common reasons that individuals seek medical care. Recent evidence now confirms that GI abnormalities are associated with many conditions outside the GI tract.

General GI Dysfunction

Indigestion
Constipation
Diarrhoea
Gas and Bloating
Recent use of antibiotics
GI Infection/Dysbiosis

Extra-intestinal Indications

Osteoporosis
Diabetes
Arthritis
Autoimmune disease
Fibromyalgia
Chronic Fatigue
Abdominal Pain

Specific GI Indications

Post Inflammatory IBS
Crohns Disease or Ulcerative Colitis (IBD)
Family history of IBD
Family history of Gastrointestinal cancers
Pancreatic Insufficiency
Gallstones

• Analytes:

Pancreatic Elastase 1
Putrefactive SCFAs
Short Chain Fatty Acids
n-Butyrate
Calprotectin
Eosinophil Protein X
pH
Beta-glucuronidase
Bile Acids
Bacteriology
Mycology
EIA
microscopic evaluation
Parasitology (if ordered)

• Specimen Requirement:

5cc stool in each vial—3 SAF,
2 Cary Blair, 1 Formalin; 40ml stool
in yellow-top cup; 20ml stool in
clean vial. May be random stool or
purge.

• Before Taking this Test:

-Avoid antibiotics, antifungals,
laxatives, and anti-diarrheals
(for 3 days)
-Avoid probiotics (for 14 days)
-Avoid use of non-steroidal
anti-inflammatories (for 2 days)
-Avoid digestive enzymes and most
pain relievers (for 4 days)
-See instructions inside test kit for
more details

• Turn-Around Time:

14 Days

Digestion/Absorption Markers:

(*Pancreatic Elastase, Putrefactive SCFAs*)

- Direct measure of Pancreatic Digestive Enzyme output without interference from digestive supplements, changes in stool transit time or marker variability. Low levels of digestive enzyme output are associated with intestinal and extra-intestinal conditions.

Gut Immunology Markers:

(*Calprotectin, Eosinophil Protein X*)

- This quantitative analysis identifies mild, moderate or severe inflammation within the GI tract. Elevations of these markers are associated with infection (bacterial, viral, & parasitic), food allergy, NSAID enteropathy, IBD and neoplasia.
- GI inflammation is associated with intestinal and extra-intestinal conditions.

Metabolic Markers:

(*Short Chain Fatty Acids, pH, Beta-glucuronidase, Bile Acids, n-Butyrate*)

- Abnormal levels of Short Chain Fatty Acids may indicate alterations in gut flora, insufficient dietary fibre, altered transit time and small bowel bacteria overgrowth.
- The chemistry markers identify imbalances that are associated with increased toxic burden within the colon, increasing long-term risk for colon and breast cancers.

Microbiology Markers:

(*Bacteriology, Mycology*)

- Quantitative measures of the beneficial flora Lactobacillus and Bifidobacterium
- Quantitative measures of additional flora, including strict pathogenic bacteria and potentially pathogenic and bacteria and yeast.
- An imbalance in GI flora is associated with intestinal and extra-intestinal conditions.

Parasitology (if ordered):

(*EIA and microscopic evaluation*)

-With the highest documented recovery rates (22% positivity rate), this Parasitology exam quantifies all ova and parasites identified.
- Includes microscopic evaluation for yeast and blood cells.

SAMPLE REPORT

Digestion / Absorption		
Analyte	Result	Reference Range
1. Pancreatic Elastase I	201	>= 201 mcg/g
2. Pultrefractive SCFAs (Total*)	9.8	1.3-8.6 micromol/g

* Total values equal the sum of all measurable parts

Digestion/Absorption

Digestion encompasses the functional activities of: mastication, gastric acid production and brush border maintenance. Absorption depends on all of the above actions, as well as a healthy gut mucosal barrier.

This test reveals important information about:

- **Calprotectin** as an important marker of gastrointestinal inflammation. It can help to distinguish IBD & IBS, as well as other inflammatory conditions.

Gut Immunology		
Analyte	Result	Reference Range
3. Eosinophil Protein X	0.3	<= 7.0 mcg/g
4. Calprotectin	38	<= 50 mcg/g

Gut Immunology

These markers of inflammation include non-specific activation of neutrophils (calprotectin) and eosinophils (EPX). Calprotectin is elevated in inflammatory bowel disease, post-infectious IBS, cancer, infection, food allergies, and NSAID enteropathy. EPX is elevated in food allergies, celiac sprue, and parasite infection.

- **Pancreatic Elastase** to distinguish maldigestion from pancreatic versus gastric sources.
- **Decreased exocrine pancreatic function** is linked to gallstones, diabetes, osteoporosis, and autoimmune diseases.

Metabolic		
Analyte	Result	Reference Range
5. Beneficial SCFAs (Total*)	20.2	>= 13.6 micromol/g
6. n-Butyrate	5.5	>= 2.5 micromol/g
7. PH	7.6	6.1-7.9
8. Beta-glucuronidase	614	406- 12.072 U/g
Bile Acids		
9. Lithocholic acid (LCA)	12.01	0.56-5.18 mg/g
10. Deoxycholic acid (DCA)	4.05	0.53-6.85 mg/g
11. LCA / DCA Ratio	2.97	0.31-1.80

* Total values equal the sum of all measurable parts

Metabolic

Gut metabolism is representative of the bacterial milieu, primarily through the presence of commensal bacteria. Metabolic activities include: mucous production, vitamin synthesis and absorption, deconjugation of steroid hormones and bile acids, fat regulation, and SCFA metabolism. These metabolic activities require a normal population of commensal bacteria without active bacterial, viral, or parasitic infection.

- **Gastrointestinal tract inflammation** occurring in response to food allergy, protein-sensitive enteropathy, helminthic infection, IBD, allergic colitis, or neoplasm.
- **Bile Acids** play an important role in fat emulsion and fat absorption. High levels of some bile acids are associated with increased toxin buildup, increased risk of gallstones, and gastro-intestinal neoplasms.