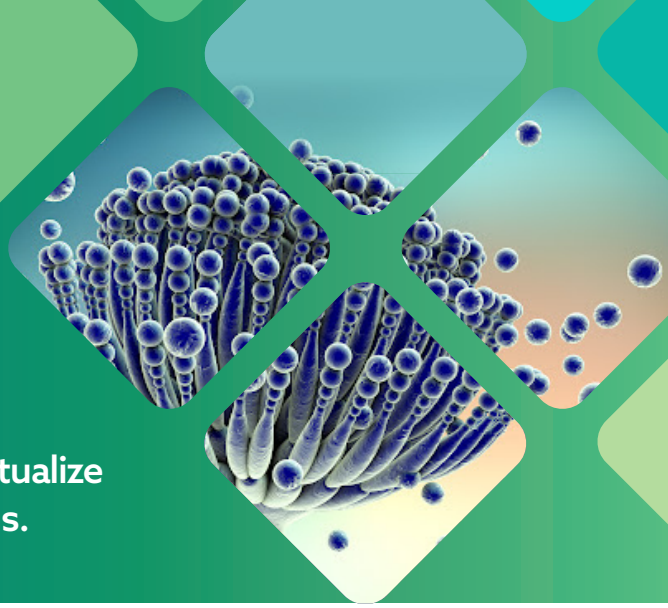
MycoTOX PROFILE®

Gastrointestinal Health

Assessing mycotoxin burden that may help contextualize gut barrier dysfunction and persistent GI symptoms.



Mycotoxins—metabolites of molds such as Aspergillus, Fusarium, and Stachybotrys—are increasingly recognized as a contributor to chronic, treatment-resistant GI presentations, including intestinal barrier dysfunction and IBD[1,3,4]. The MycoTOX Profile is a urine-based LC-MS/MS assay measuring mycotoxins across the major toxigenic classes, designed to help clinicians uncover mycotoxin exposure and guide a therapeutic strategy for prevention and treatment.[1–5]

When Might Providers Consider the MycoTOX Profile?

IBD or Relapsing GI Presentations with Environmental Exposure History: Known or suspected mold/water-damaged building exposure in patients with Crohn's disease, ulcerative colitis, or other relapsing GI symptoms.[3,4,5]

Intestinal Permeability ("Leaky Gut") Presentations: GI complaints with systemic immune or sensitivity patterns suggestive of impaired mucosal barrier integrity.[1,3,4]

Dysbiosis-Pattern GI Symptoms with Environmental Exposure History: Bloating or altered bowel habits in patients with water-damaged building occupancy or high-mold-exposure food sources.[1]

GI Symptoms with Overlapping Systemic Features: GI complaints co-occurring with fatigue, cognitive changes, or mood symptoms suggestive of a broader mycotoxin burden[6].

What MycoTOX Profile Measures

Selected Analytes	Everyday Exposure Sources	GI Relevance
Aflatoxins	Peanuts, tree nuts, corn, and other commodities with fungal contamination.[6]	Primarily hepatotoxic; given close enterohepatic circulation between liver and gut, elevated aflatoxin burden may be a relevant consideration in patients with GI symptoms alongside signs of impaired detoxification capacity.[6]
Ochratoxin A	Grain-based foods, coffee, dried fruits, spices; indoor mold environments.[6]	The most prevalent mycotoxin in this class; primarily nephrotoxic. May add context on total mycotoxin/detoxification burden in patients with complex, multisystem GI presentations.[6]
Trichothecenes (Roridin E, Verrucarin A)	Water-damaged building materials, particularly Stachybotrys-contaminated substrates; contaminated grains and cereal products more broadly across the trichothecene class.[6]	Trichothecenes, including the macrocyclic forms measured on this panel, act as potent ribosome-inactivating agents; documented to disrupt intestinal tight-junction proteins and epithelial barrier integrity across the trichothecene class. Most direct mechanistic evidence for barrier dysfunction and dysbiosis-pattern GI symptoms among the analytes on this panel.[1,3,4]

What the MycoTOX Profile Measures (Cont)

Selected Analytes	Everyday Exposure Sources	GI Relevance
Zearalenone	Grains and grain-derived products; water-damaged building environments.[6]	Known primarily for endocrine-disrupting and reproductive effects; may help contextualize overlapping endocrine and GI symptom presentations during mold-related workup.[6]
Other (e.g., Enniatin B)	Indoor mold environments, particularly Aspergillus, Chaetomium, and Fusarium species.[6]	Enniatin B has been shown in vitro to modulate the GI toxicity of co-occurring trichothecenes on intestinal epithelial cells[2]; gliotoxin, mycophenolic acid, chaetoglobosin, sterigmatocystin, and citrinin add immunosuppressive and broader mold-burden context relevant to complex, treatment-resistant GI presentations.

Clinical Applications & Evidence Context

Condition	Clinical Encapsulation
Inflammatory Bowel Disease (Crohn's Disease & Ulcerative Colitis)	Trichothecene mycotoxins, including the macrocyclic forms measured on this panel, have been shown in experimental and mechanistic models to impair intestinal tight-junction integrity and activate inflammatory signaling pathways, supporting a possible toxin-driven contributor in complex or relapsing IBD presentations.[3,4,5]
Intestinal Permeability ("Leaky Gut")	Mycotoxins, including trichothecenes, have documented effects on gut epithelial barrier integrity and microbiota composition in experimental models, offering context for a toxicant-driven contributor to barrier dysfunction.[1,3,4]
Dysbiosis-Pattern GI Symptoms with Mold Exposure History	Patients with known or suspected mold exposure (water-damaged buildings, high-humidity environments, contaminated food) presenting with bloating or altered bowel habits may benefit from mycotoxin burden assessment, given documented effects on gut microbiota composition.[1]
Combined / Co-Occurring Mycotoxin Exposure	Mycotoxins frequently co-occur in food and water-damaged environments; enniatin B has been shown in vitro to modulate the gastrointestinal toxicity of co-occurring trichothecenes on intestinal epithelial cells, suggesting combined mycotoxin exposure may alter net GI toxic burden relative to single-toxin exposure.[2]

How the MycoTOX Profile Supports Clinical Reasoning

Adds Exposure Context

Adds mycotoxin data that may be considered alongside water-damaged, occupational, or dietary exposure history in patients with persistent or unexplained GI symptoms[1,6].

Mechanistic Pathway Context

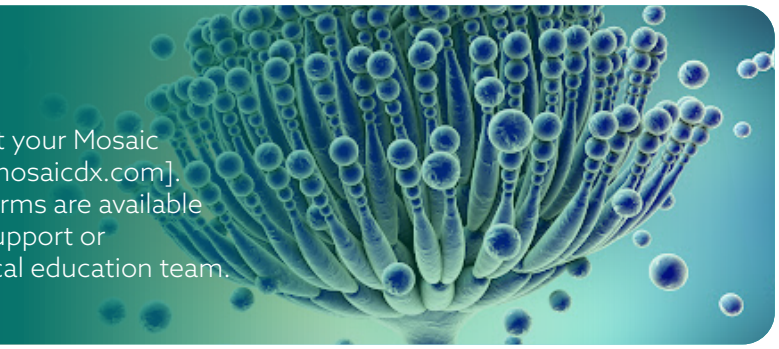
Detection of specific mycotoxin classes may help contextualize biologically plausible mechanisms—including intestinal tight-junction disruption, oxidative stress, and gut microbiota dysbiosis—that are relevant to the patient's GI symptom profile[1,3,4].

Multi-Route Exposure Assessment

MycoTOX evaluates mycotoxin exposure via both inhalational (water-damaged environments) and dietary routes, broadening the clinical utility of exposure-history interpretation for GI presentations[1,6].

How to Order

To order the MycoTOX Profile test, contact your Mosaic Diagnostics representative or visit [www.mosaicdx.com]. Specimen collection kits and requisition forms are available through your account portal. For clinical support or interpretation questions, contact our clinical education team.



This document is intended for licensed healthcare professionals and is for informational and educational purposes only. The test results are not intended to diagnose, treat, cure, or prevent disease. All clinical interpretation should be done by a qualified healthcare professional in the context of the individual patient. Statements regarding associations between health symptoms and conditions do not constitute diagnostic claims.

References

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