

## About Mycotoxins

Q: What are mycotoxins?

A: Mycotoxins are toxic secondary metabolic compounds commonly occurring in cereals. But can be in other products if they build up in animal tissues or if mold growth occurs on other products.

Q: Why is it necessary to test mycotoxins?

A: People and animals who intake mycotoxins may catch mycotoxicosis. Worldwide legislation is in place setting maximum limits for mycotoxins in cereals, processed cereal products and other foods to ensure that they are not harmful for human consumption.

Q: When to test mycotoxins? And who?

A: The analysis of mycotoxins presents some unique challenges because the contamination of toxins by fungi is a naturally occurring process. Grain handling and storage facilities must screen inbound cereals. Pre-harvest production is affected by climatic conditions and agricultural practices, such as extreme heat and drought before harvest; on the other hand, production after harvest depends on storage conditions, especially moist and humid conditions. For example, it usually controls mycotoxins growth when storing cereals below relative humidity 70% and below moisture content 15%. Thus, it is considered best practice to perform mycotoxin testing at every stage in the seed and cereal supply chain. Some small and medium companies prefer to send samples to accredited laboratory for mycotoxin testing. This is a good practice but using this exclusively creates dangerous delays in getting results. A fast qualitative test might alert you to potential issues and allow you to hold products until quantitative tests results are available. Larger companies usually establish Quality Control Laboratory for mycotoxin testing and for those customers we offer our IAC columns and quantitative test kits and analyzers.

Q: How to test mycotoxins?

A: Three primary methods are available for mycotoxin testing: HPLC method, Elisa method and Rapid Test method (lateral flow).

**HPLC**, High Performance Liquid Chromatography, guarantees high sensitivity. However, it requires proficient technician and expensive laboratory equipment. It is also time-consuming.

**Elisa Kit**, stands for Enzyme Linked Immunosorbent Assay Kit. It is usually for massive pre-screening. It requires minimal training and some laboratory equipment.

**Rapid Test Product (lateral flow)** is required when a fast decision is to be made whether goods fulfill the defined quality criteria. It does not require training nor laboratory equipment for qualitative result. Minimal training and laboratory equipment are required for quantitative result.



1295 Morningside Avenue, Unit 16-18  
Scarborough, ON M1B 4Z4 Canada  
Phone: 416-261-4865 Fax: 416-261-7879  
[www.scigiene.com](http://www.scigiene.com)