

Breakthrough in mycotoxin testing to improve food safety

Fully-automated tests reduce workload while strengthening risk management in the food and feed supply chain

FOSS is proud to announce the MycoFoss™, a new mycotoxin analyser for rapid tests for the presence of mycotoxins in grain and corn. MycoFoss represents a real breakthrough in the critical job of testing for harmful mycotoxins because it is the world's first ever fully-automated solution for rapid tests performed at grain reception, feed mills or flour mills.

Mycotoxin contamination in grain, feed or flour has always been a risk to food safety and animal production since the dawn of agriculture. Managing the risk is only becoming more important as extreme weather-events and humid conditions under harvest, transport and storage allow mycotoxins to thrive.

Push button testing of up to six mycotoxins in one go

While the ability to perform rapid tests for the presence of mycotoxins is essential for control of food and feed raw materials, the methods currently available are limited. They involve complex manual steps such as pipetting, timing, weighing, mixing and shaking, all of which can lead to the risk of human error.

In contrast, the revolutionary MycoFoss is operated at the push of a button. Users simply place a ground sample in the instrument and select the appropriate test on a touch screen display. Results for key mycotoxin risks including DON, FUM, AFLA, ZEN, OTA and T-2 are delivered within eight minutes. A multiplex option allows up to six mycotoxins to be tested in one go. This is a facility that can become increasingly relevant as industry regulations and guidelines encompass ever more mycotoxins.

More data for risk management in grain, feed and flour production

The ability to get more test data with improved consistency empowers MycoFoss users to handle quality-control questions such as the handling and segregation of incoming corn and wheat, the use of additive binders in feed production and compliance with legal requirements for mycotoxin levels in food production.

The ease of operation reduces dependence on specialist staff and frees-up resources, for example, at grain receipt during the busy harvest period. Further, the low-cost-per sample, empowers users to test as often as needed and with the possibility to test for more types of mycotoxins than previously tested with slower manual methods.

Innovative technology reduces risk on all levels

MycoFoss™ combines a number of existing and newer technologies to offer a groundbreaking approach to mycotoxin risk management that is safe and accurate on all levels.

The patented measurement uses the well-known immune assay method in combination with sophisticated artificial-intelligence software. Individual mycotoxin cells are singled-out and given a fluorescent marker. They are then passed through a capillary tube for counting using established flow cytometry techniques of which FOSS is highly experienced from earlier work with, for example, somatic cell counting for quality control of milk.

Completing the solution are a raft of innovative service concepts that further simplify mycotoxin risk management. Online support helps to maintain uptime and performance of instruments while connectivity ensures efficient data management and monitoring for adherence to standard operating procedures. Populations of instruments can be managed from the desktop to ensure consistent testing across any location.

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