

# HIGH-THROUGHPUT MYCOTOXIN DETECTION FOR GRAIN AND FEED

**MaxSignal® HTS**  
Automated Solution



**PerkinElmer®**  
*For the Better*



## MYCOTOXINS: TAKING ON A COMMON CONTAMINANT

Mycotoxins are present in much of the grains and cereals produced today – as high as 25% above regulatory limits in many cases. And mass production and climate conditions make those times of high incidence increasingly common. So for regional, corporate labs, and contract labs, as well as grain, feed, and pet-food processors, mitigating the risk of mycotoxins reaching their customers is mission critical. And that means accurate, efficient, high-throughput ELISA testing.

Our MaxSignal HTS solution hits on all these criteria, making it the most versatile mycotoxin testing solution available. It delivers:

- High throughput – up to 180 tests in 90 minutes
- Automated setup and walkaway testing
- Testing for complex matrices – test grains, grain derivatives, finished feeds, pet foods, and more
- Analysis of different mycotoxins and matrices in the same run
- Flexibility to use automation for other ELISA tests

And it's all part of a complete, end-to-end mycotoxin detection solution, helping you ensure a safe grain and feed supply worldwide.

[Click here for mycotoxin solutions for the entire grain and feed workflow](#) ►

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## 6-IN-1 SIMULTANEOUS EXTRACTION METHOD

MaxSignal® HTS Mycotoxin Automation Bundle is designed and developed to test grains, oilseed products, finished feed, and pet food ingredients, delivering a simple, simultaneous, 6-in-1 sample preparation method for total aflatoxin, deoxynivalenol (DON), fumonisin, zearalenone, ochratoxin, and T2/HT2. This speeds testing and reduces cross-contamination risks while requiring fewer reagents and hands-on technician time.

When used with the DS2 Automated Laboratory ELISA system, analysis is automatic, providing highly accurate and consistent results that enable faster, more informed decisions for incoming samples. Plus, the integrated bar-code scanner provides excellent sample traceability, and data can be easily linked to LIMS for seamless results recording and sharing.

- **High efficiency** – reduce hands-on time
- **Fast detection** – less than 90 minutes to results
- **Easy-to-use**
- **Robust, consistent, and reliable**
- **Manual and automated testing options**

# MAXSIGNAL HTS MYCOTOXIN ELISA KITS

## SENSITIVITY (DETECTION LIMIT)

SAMPLE TYPE	MAXSIGNAL HTS DON ELISA KIT	MAXSIGNAL HTS TOTAL AFLATOXIN ELISA KIT	MAXSIGNAL HTS FUMONISIN ELISA KIT	MAXSIGNAL HTS ZEARALENONE ELISA KIT	MAXSIGNAL HTS OCHRATOXIN A ELISA KIT	MAXSIGNAL HTS T-2/HT-2 ELISA KIT
Wheat (Aqueous)	0.183 ppm	-	-	-	-	-
Wheat (Organic)	0.5 ppm	1.2 ppb	0.9 ppm	0.001 ppm	-	23 ppb
Barley	0.194 ppm	-	-	-	-	-
Feed	1.2 ppm	2.85 ppb	1 ppm	0.010 ppm	7 ppb	31 ppb
Corn Gluten Meal	0.8 ppm	2.7 ppb	3.1 ppm	0.010 ppm	9 ppb	65 ppb
Corn Steep Liquor Pellets	1.6 ppm	-	1 ppm	0.002 ppm	27 ppb	23 ppb
Cereal	0.183 ppm	0.4 ppb	0.7 ppm	0.004 ppm	-	-
DDGS	1.2 ppm	4.6 ppb	1.1 ppm	0.080 ppm	1 ppb	24 ppb
Soybean Meal	-	-	0.6 ppm	0.001 ppm	-	-

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# MAXSIGNAL HTS MYCOTOXIN ELISA KITS

## SPECIFICITY

PRODUCT NAME	ANALYTE	CROSS-REACTIVITY (%)
MaxSignal HTS DON ELISA Kit	Deoxynivalenol	100
	15-Acetyl-DON	40
MaxSignal HTS Total Aflatoxin ELISA Kit	Aflatoxin B1	100
	Aflatoxin M1	>100
	Aflatoxin G1	36
	Aflatoxin G2	22
	Aflatoxin B2	23
MaxSignal HTS Fumonisin ELISA Kit	Fumonisin B1	100
	Fumonisin B2	81
	Fumonisin B3	94
MaxSignal HTS Zearalenone ELISA Kit	Zearalenone	100
MaxSignal HTS Ochratoxin A ELISA Kit	Ochratoxin A	100
MaxSignal HTS T-2/HT-2 ELISA Kit	T-2	100
	HT-2	70

MaxSignal® HTS mycotoxin ELISA kits are competitive enzyme immunoassays for the quantitative analysis of 6 mycotoxins. These kits enable government agencies, food manufacturers, and quality assurance organizations to detect mycotoxins in many sample types – including single-commodity samples and complex finished-feed products – with a unique extraction method that’s accurate, fast, cost-effective, and easy to use.

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# MAXSIGNAL HTS MYCOTOXIN ELISA KITS



A mycotoxin testing regiment can be difficult to plan for. Some years there is low incidence and outbreak, some years there are large outbreaks of a single mycotoxin, other years there are regional outbreaks of different mycotoxins, but every year has a new crop! And then there all the potential combinations of the previous. So what is really needed is a flexible system that can test for one or more mycotoxins in various commodities and finished products and the system must be scalable to be able to handle testing requirement surges, but does not tie up large capital expenditures during those times when testing requirements are low.

At PerkinElmer, we recognize this need and developed the automated, high-throughput MaxSignal ELISA solution and paired it with our unique reagent rental program. Our reagent rental program allows you to budget for the minimal testing that you plan to have, but then scale up – and quickly – if required. It does not tie up precious capital and can often be paid for in operational budgets.

Contact us to find out more about this unique program. We can help customize a solution to meet your specific testing requirements and financial situation.

At PerkinElmer, we recognize this need and developed the automated, high-throughput MaxSignal ELISA solution and paired it with our unique reagent rental program in addition to outright purchase.

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[Get a Quote](#) ▶

# RELIABLE, ACCURATE WALKAWAY AUTOMATION

Designed with full walkaway capability, the DS2 Automated Laboratory ELISA system can quickly and easily process two 96-well microplates and up to 180 mycotoxin tests in 90 minutes. Plus, it features the most intuitive control system available, including simple chain of custody and instrument diagnostics.

This system delivers no-fuss, sample-in/results-out automation of microplate assays, taking charge of the entire workflow:

- Sample dilution and distribution
- Incubation, washing, and reagent dispensing
- Reading with automatic data reduction and quality control
- Automatic barcode scanning

Bottom line, the DS2 Automated Laboratory ELISA system delivers everything you need to ensure rigorous, repeatable analysis and accurate results.



# RELIABLE, ACCURATE WALKAWAY AUTOMATION

Two sample-tip racks  
(216 tips total)

Embedded reader and  
two-plate incubator

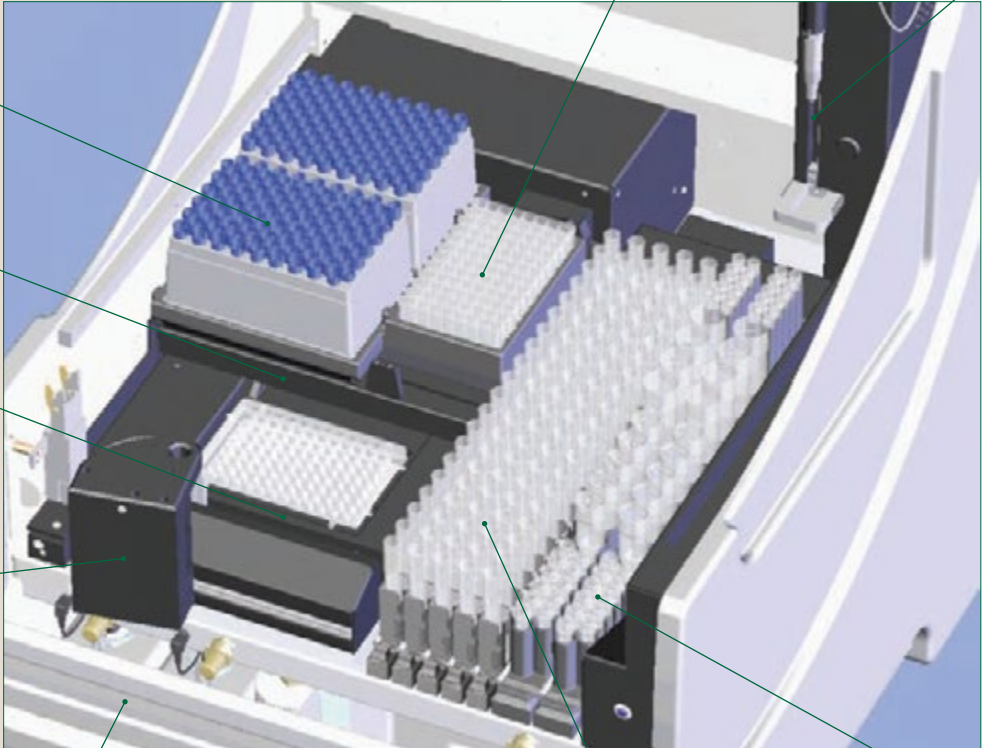
Two independent  
plate carriers

Barcode reader  
(optional)

Access panel to buffers, waste  
bottles, and waste-tip container

12 deep-well dilution  
strips (96 wells total)

Multipurpose  
pipetting tool

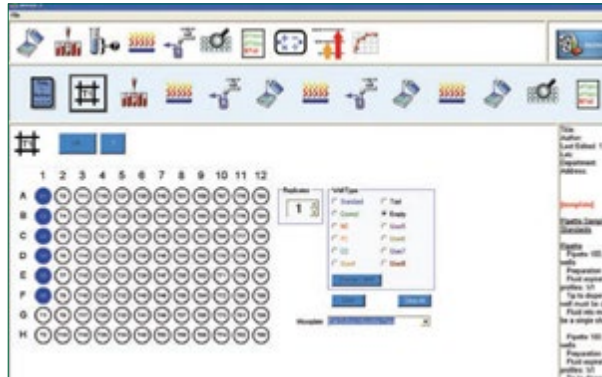


Five slide-in sample racks  
(100 samples total)

Two slide-in reagent  
and control racks



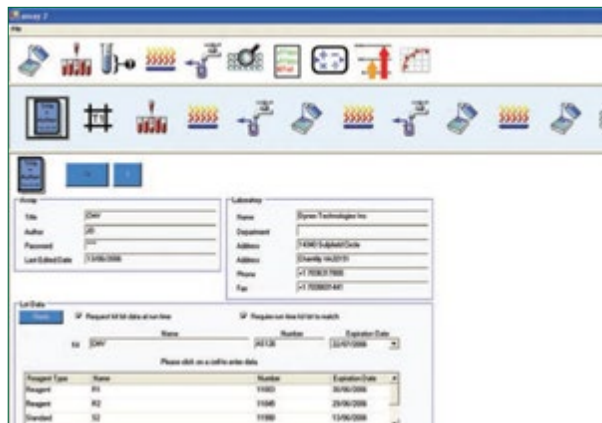
# POWERFUL SOFTWARE THAT INTUITS YOUR NEEDS



Assay Writer Technology



ESP Technology



Recording Technology

Feature-rich and groundbreaking in its process simulation and ease of use, DS-Matrix™ software allows you to rapidly integrate automation into your lab with confidence, automatically processing data for nearly immediate results. The simple graphical interface means that any lab technician can use the DS2 Automated Laboratory ELISA system with minimal training. With DS-Matrix software, you get:

## PROCESS SIMULATOR

No need to waste reagents or consumables: the system shows you a full animation of the assay steps you've outlined. If you want to adjust the parameters of your mycotoxin test kit, the system shows you how it will work before you implement the change.

## PROCESS TIMELINE

Once you begin running your mycotoxin test kit, you know exactly where you are and how much time is left.

## ESP

Patent-pending technology that provides in-process verification of critical fluid and sample transfer.

## RECORDING

The system enables recording and assurance of lot-specific data.

# THE LITTLE THINGS SET IT APART

The easy-to-use DS2 Automated Laboratory ELISA system is designed for efficiency and reliability, with few moving parts – one multifunction robot arm does everything from pipetting to operating the barcode reader. Plus, the system's vertical design and patent-pending multiplate carrier save space, enabling maximum consumables storage in minimal benchtop footprint.



With the DS2 Automated Laboratory ELISA system, you get:

- 216 sample tips
- 96 dilution vessels in 8-way strips
- 20 reagent tips
- 8 large and 10 medium reagent bottles
- 24 standard/control bottles

Plus, you can set the instrument to prompt you if you need to take any immediate actions such as adding reagents or wash fluids. You can even have the DS2 Automated Laboratory ELISA system deliver an audible alarm or send you an email outlining any problems. And integrated self-diagnostics make troubleshooting easy – you can even send our technical support team a problem description from within the application, with system information attached automatically.

PART NO.	DESCRIPTION
FOOD-4007-01	MaxSignal® HTS DON ELISA Kit
FOOD-4008-01	MaxSignal® HTS Total Aflatoxin ELISA Kit
FOOD-4009-01	MaxSignal® HTS Fumonisin ELISA Kit
FOOD-4010-01	MaxSignal® HTS Zearalenone ELISA Kit
FOOD-4011-01	MaxSignal® HTS Ochratoxin A ELISA Kit
FOOD-4012-01	MaxSignal® HTS T-2/HT-2 ELISA Kit
FOOD-4013-01	MaxSignal® HTS Consumables Kit
62000	DS2 Automated Laboratory ELISA

For more information visit [www.perkinelmer.com/MaxSignal-HTS-Mycotoxins](http://www.perkinelmer.com/MaxSignal-HTS-Mycotoxins)

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