Mycotoxins

If you are involved in the Food or Feed Industries you need to know that mycotoxins are amongst the most toxic compounds that can occur in foods. In terms of implications for human health and the economy, they are by far the most important contaminants of the food chain.

Mycotoxins are produced by fungi infecting agricultural crops during growth, drying and storage and have become the focus of regulatory concerns throughout the world.

As such you need to formulate a strategy that establishes the risks for your products and incorporates an appropriate testing regime. Premier Analytical's complete mycotoxin service can do this for you.

Premier Analytical Services is one of the leading food testing centres in Europe, providing routine and research analytical services in the areas of food characterisation, authenticity and safety.

A dedicated team, utilising dedicated facilities, provides our Mycotoxin Service. Our unique experience and expertise has resulted in a scope of UKAS accreditation that covers 40 mycotoxins validated in an extensive range of sample matrices. This means you only need to consult one service provider and guarantees you accuracy and precision, thereby providing you with confidence in results you can trust. A necessity in an increasingly regulated area

Mycotoxins

	UKAS Accredited	Limit of Quantification µg/Kg (ppb)
Aflatoxins		
Aflatoxins B1 B2 G1 G2	Yes	0.1 each
Aflatoxin M1	Yes	0.01
Citrinin		
Citrinin	Yes	0.2
Ergot alkaloids suite		
Includes the following 12 Ergot alkaloids:		
1) Ergotamine	Yes	2
2) Ergotaminine	Yes	2
3) Ergocornine	Yes	2
4) Ergocorninine	Yes	2
5) Ergocristine	Yes	2
6) Ergocristinine	Yes	2
7) Ergocryptine	Yes	2
8) Ergocryptinine	Yes	2
9) Ergosine	Yes	2
10) Ergosinine	Yes	2
11) Ergometrine	Yes	2
12) Ergometrinine	Yes	2
Fumonisins		
Fumonisin (Fum) B_1 B_2 B_3	Yes	10 each
Moniliformin		
Moniliformin (MON)	Yes	10
Ochratoxin A		
Ochratoxin A (OTA)	Yes	0.1
Patulin		
Patulin	Yes	3
Sterigmatocystin		
Sterigmatocystin (SMC)	Yes	3
Trichothecenes suite (Trics)		
Includes the following 9 Trichothescenes:		
1) 3 Acetyldeoxynivalenol (3 AcDON)	Yes	10
2) 15 Acetyldeoxynivalenol (15 AcDON)	Yes	10
3) Deoxynivalenol (DON or Vomitoxin)	Yes	10
4) Diacetoxyscirpenol (DAS)	Yes	10
5) Fusarenone X (Fus X)	Yes	10
6) HT2 Toxin (HT2)	Yes	10
7) Neosolaniol (NEO)	Yes	10
8) Nivalenol (NIV)	Yes	10
9) T2 Toxin (T2)	Yes	10
Zearalenone		
Zearalenone (ZEA, ZON, F2)	Yes	3
Cyclopiazonic acid		
Cyclopiazonic acid (CPA)	Yes	10
Alternaria toxins		
Alternaria toxins (AOH, AME)	Yes	10

Please refer to the UKAS Schedule of Accreditation for the specific matrices.

Plant Toxins

	UKAS Accredited	Limit of Quantification µg/Kg (ppb)
Glycoalkaloids		
Glycoalkaloids	Yes	10

Please refer to the UKAS Schedule of Accreditation for the specific matrices.

Bacterial Toxins

	UKAS Accredited	Limit of Quantification µg/Kg (ppb)
Bacillius Cereus toxin		
Cereulide	No	5

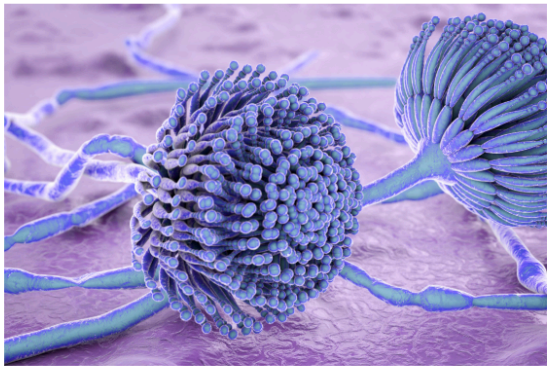
Please refer to the UKAS Schedule of Accreditation for the specific matrices.

Complete Mycotoxin Service

Advice with Rationale
You will be able to pursue the most appropriate course of action after you consult our mycotoxin experts for risk assessment, based on your raw materials and processes. They will provide you with recommendations regarding sampling, sampling frequency and testing regimes.

Sample Preparation
If necessary our large-scale sample handling facilities will ensure the statistically representative sample preparation required for regulatory compliance.

Sample Extraction and Clean-Up
We are expert at achieving a full quantitative extraction. Extraction and clean-up procedures have been validated with naturally contaminated materials. Both are critical contributors to the accuracy of the final result. To provide confidence in every result spiked samples are used to demonstrate that strict method performance criteria are met by every test.



End Determination Techniques
Based on the extremely toxic nature of mycotoxins the regulatory and industry guideline limits have been established at very low levels, typically low parts per billion. The appropriate end determination technique for each mycotoxin is therefore selected using our experience and expertise in order to provide the sensitivity required to meet regulatory and guideline limits.

Interpretation of Results
Premier Analytical's Complete Mycotoxin Service provides not just results but interpretation as well, thus enabling you to take appropriate actions.

Quality Assurance
Exemplary performance in collaborative (EU and UK) and proficiency testing schemes e.g. FAPAS, demonstrates the accuracy of our results.