

Mycotoxins & Biotoxins

Eurofins' portfolio covers several hundred substances

Mycotoxins are toxic secondary metabolites produced by fungi. Several hundred substances are known. Biotoxins or natural plant toxins are secondary metabolic products, formed by plants to protect against herbivores by many plant species worldwide. Both mycotoxins and biotoxins can show acute or chronic toxic effects towards humans and animals even in low concentrations.

Eurofins' comprehensive risk-orientated mycotoxin and biotoxin testing package includes screening and confirmatory methods for all regulated and a broad range of additional mycotoxins and biotoxins. It is complemented by sampling services and rapidust[®], the first on-site test system for mycotoxins, including both representative sampling and rapid analysis.



Our portfolio

Our portfolio covers a large range of **confirmatory and screening methods** for all common food and feed matrices including the following substances:

Regulated mycotoxins

- Aflatoxins B₁, B₂, G₁, G₂, M₁
- Ochratoxin A (OTA)
- Deoxynivalenol (DON)
- Zearalenone
- Fumonisin B₁, B₂, B₃
- T-2 / HT-2 toxin
- Citrinin
- Patulin
- Ergot alkaloids

Further mycotoxins

- Alternaria toxins
- Beauvericin
- Enniatins A, A₁, B, B₁
- 3- and 15-Acetyldeoxynivalenol
- Nivalenol
- Masked mycotoxins (DON-3-glycoside)
- Sterigmatocystin
- Moniliformin
- Fusarenone X
- Fusaric acid
- Neosolaniol
- Mono- and Diacetoxyscirpenol
- Cyclopiazonic acid
- Others

Biotoxins

- Opium alkaloids (Morphin)
- Tropane alkaloids
- Pyrrolizidine alkaloids
- Others

Sampling

Representative sampling is the key success factor for the correct assessment of food and feed commodities, as mycotoxins usually occur heterogeneously distributed throughout the lot. Eurofins has set up a global supply chain control network with sampling and inspection services in compliance with European or local food and feed law.

Methods and instruments

Sample preparation

- Dry grinding
- Wet grinding / slurry preparation
- Up to 100 kg of sample

Sample clean-up

- Sample preparation robots
- Automatic clean-up systems for immuno-affinity columns (ASPEC)

Measuring techniques

- HPLC-FLD
- LC-MS/MS systems
- Online-2D-SPE-HPLC-FLD
- High-resolution LC-MS

On-site testing - rapidust[®]

With rapidust[®] Eurofins offers the first on-site test system for mycotoxins, including both representative sampling of grain lots and rapid analysis.

Based on the proven fact that the contamination of the overall grain lot and its dust particles can be correlated, rapidust[®] gives customers unique certainty on the mycotoxin contamination of large grain lots within minutes.

Quality & Services

Eurofins laboratories are accredited according to DIN EN ISO/IEC 17025:2005 and take regularly part in proficiency tests of the applied methods.

Additional Services:

- Express service on request
- Sample registration, tracking and test reports online (EOL)
- Method development and research projects on demand
- Sampling & inspection services