



LVA Reference Materials

SETTING NEW STANDARDS IN MYCOTOXIN TESTING

We provide more than just reference materials for mycotoxins – we are shaping the future of analytical precision.



ISO 17034 accreditation

Supported by our ISO 17034 accreditation, we bring a wealth of expertise to the production of every reference standard.



A Century of Food Safety

Building on 100 years of tradition and expertise dedicated to advancing food safety.



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MYCOTOXINS



Mycotoxins are toxic compounds produced by molds such as *Aspergillus*, *Fusarium*, and *Penicillium*, which can grow on crops under unfavorable storage and environmental conditions. These toxins are commonly found in grains, nuts, coffee, dried fruits, and other agricultural products, and can pose serious health risks to both humans and animals. Some of the most well-known mycotoxins include aflatoxins, ochratoxin A, deoxynivalenol, and fumonisins. They are known to cause a range of harmful effects, such as liver damage, immune suppression, kidney disease, and even cancer.

The control and monitoring of mycotoxins in food and feed are crucial for safeguarding public health. Regulatory authorities worldwide, such as the European Union and the

World Health Organization, have established strict guidelines and maximum permissible levels for mycotoxins in food and animal feed. These regulations ensure that food products do not pose a health risk to consumers, preventing long-term exposure to these dangerous substances.

Regular testing and monitoring are required to detect and quantify mycotoxins in food products. Accredited laboratories play an essential role in this process, using validated methods to ensure compliance with these regulatory standards. By controlling mycotoxin levels, we can reduce health risks, maintain food safety, and ensure that agricultural products meet the required safety standards for global trade.

REFERENCE MATERIALS



Reference materials are essential for accurate and reliable mycotoxin analysis, serving as calibration standards that enable precise detection, method validation, and quality control. Our **ISO 17034** accredited standards provide the highest level of accuracy and consistency, meeting stringent regulatory requirements and ensuring reproducible results in laboratory testing.

To guarantee the **purity** and **consistency** of our materials, we use an ISO 17025 accredited q-NMR method for the detailed analysis of raw materials. This advanced technique ensures that each batch of reference material is free from impurities and contaminants. We also conduct **long-term stability monitoring** for each batch to ensure

that our reference materials retain their potency and performance throughout their shelf life. This comprehensive testing provides confidence that the materials will deliver reliable results from the first use to the last drop.

Our reference materials are designed with **user convenience** in mind, packaged in screw cap vials that allow for **easy handling** and **storage**. This design ensures that the product remains sealed and stable from the initial opening to the final use, minimizing contamination risks and making the entire process from pipetting to analysis as efficient and hassle-free as possible.

“Reliability, Purity, and Ease – The Perfect Standards for Your Mycotoxin Analysis.”

Calibrant Solutions



Aflatoxin M1

Aflatoxin M1 is a metabolite of Aflatoxin B1, produced when contaminated feed is ingested by dairy animals. It is primarily found in milk and dairy products. Aflatoxin M1 is carcinogenic, with strong links to liver cancer.

mL 2.5 $\mu\text{g/mL}$ 1.0



Ochratoxin A

Ochratoxin A, produced by *Aspergillus* and *Penicillium* species, is commonly found in cereals, coffee, dried fruits, and wine. It is a potent nephrotoxin, causing kidney damage, and is also associated with carcinogenic and immunosuppressive effects.

mL 2.5 $\mu\text{g/mL}$ 10.0

Patulin

Patulin is a mycotoxin produced by *Penicillium* species, commonly found in rotting apples and apple-based products. It is known for its acute toxicity, particularly its effects on the gastrointestinal system and immune suppression.

mL 2.5 $\mu\text{g/mL}$ 100.0



Fusarium Mix

The Fusarium Mix Solution combines key mycotoxins produced by *Fusarium* species, including Deoxynivalenol, Zearalenone, HT-2 toxin, and T-2 toxin.

mL 2.5 µg/mL 100.0



Deoxynivalenol

Deoxynivalenol, produced by *Fusarium graminearum* and *Fusarium culmorum*, contaminates cereals like wheat and maize. Known as "vomitoxin," it disrupts protein synthesis, causing vomiting, reduced feed intake, and immune suppression.

mL 2.5 µg/mL 100.0



Zearalenone

Zearalenone is a mycotoxin produced by *Fusarium* species found in cereals. It mimics estrogen, causing reproductive issues in animals, such as reduced fertility. It is heat-resistant, requiring careful monitoring in food to prevent health risks.

mL 2.5 µg/mL 100.0



HT-2 Toxin

HT-2 toxin, produced by *Fusarium sporotrichioides*, contaminates grains like oats and barley. It is highly toxic, causing immunosuppression and gastrointestinal damage.

mL 2.5 µg/mL 100.0



T-2 Toxin

T-2 toxin, another mycotoxin from *Fusarium* species, contaminates cereals under cold conditions. It is cytotoxic, causing skin irritation, vomiting, and immune suppression.

mL 2.5 µg/mL 100.0

Aflatoxin Mix

The Aflatoxin Mix Solution contains Aflatoxin B1, Aflatoxin B2, Aflatoxin G1 and Aflatoxin G2, representing key aflatoxins regulated in food and feed.

mL 2.5 µg/mL 1.0



Aflatoxin B1

Aflatoxin B1, produced by *Aspergillus flavus* and *Aspergillus parasiticus*, is the most toxic and prevalent aflatoxin. It contaminates crops like maize, peanuts, and tree nuts. Aflatoxin B1 is a potent carcinogen linked to liver cancer and exhibits acute toxicity.

mL 2.5 µg/mL 1.0



Aflatoxin B2

Aflatoxin B2, produced by *Aspergillus flavus* and *Aspergillus parasiticus*, is a less prevalent but toxic aflatoxin found in crops like maize, peanuts, and tree nuts. While less potent than Aflatoxin B1, it can still cause liver damage and is classified as a carcinogen.

mL 2.5 µg/mL 1.0



Aflatoxin G1

Aflatoxin G1, another toxin from *Aspergillus flavus* and *Aspergillus parasiticus*, contaminates cereals and nuts. It is highly hepatotoxic and carcinogenic, although less so than Aflatoxin B1.

mL 2.5 µg/mL 1.0



Aflatoxin G2

Aflatoxin G2 is the least toxic of the major aflatoxins but still poses a risk. Found alongside Aflatoxin G1, it contaminates similar commodities and contributes to cumulative toxic effects.

mL 2.5 µg/mL 1.0

Fumonisin Mix

The Fumonisin Mix Solution consists of Fumonisin B1 and Fumonisin B2, which are major toxins commonly found in corn-based materials.

mL 2.5 µg/mL 50.0



Fumonisin B1

Fumonisin B1 is produced by *Fusarium verticillioides* and *Fusarium proliferatum* and commonly contaminates maize and other cereals. It is a potent mycotoxin known for causing neural tube defects in animals, as well as liver and kidney damage.

mL 2.5 µg/mL 50.0



Fumonisin B2

Fumonisin B2, is less toxic but still contributes to the harmful effects seen with fumonisin contamination. It affects the liver and kidneys and has been implicated in cancer development.

mL 2.5 µg/mL 50.0

