SGS North America’s Agricultural Services laboratories have the facilities, equipment and experience to service your complete food and feed testing needs. SGS routinely tests the quality of dairy products, pet food, livestock feed, co-products and grain. With cutting edge technology and standardized testing methods, SGS laboratories are fully equipped to meet your needs. Our trained scientists and technicians hold advanced degrees in chemistry and microbiology, as well as years of laboratory experience. Our laboratories are ISO 17025 accredited and are recognized by several food and feed associations as approved laboratories.
Mycotoxins are secondary metabolites produced by fungi which contaminate crops and feed products. The formation of mycotoxins is dependent on weather and environmental conditions, making them difficult to control. In addition, mycotoxins can become concentrated in some processing and production of products from these crops and feeds. High levels of mycotoxins in food, pet food and livestock feed can be detrimental to the health of humans and animals. Testing of feed and food materials is necessary to keep these products safe, and many countries have set standards to control the levels of mycotoxins.

**COMMON MYCOTOXINS**

**DEOXYNIVALENOL (DON) OR VOMITOXIN**

DON is a trichothecene produced by various *Fusarium* species and is usually favored by cool, wet weather. DON causes feed refusal, vomiting and immunosuppression.

**AFLATOXIN**

Aflatoxins are a group of mycotoxins consisting of aflatoxin B1, B2, G1, G2 and M1 which are produced by *Aspergillus* species and are usually most severe when drought, extreme heat or injury occurs. Aflatoxins are potent carcinogens.

**FUMONISIN**

Fumonisins are a group of mycotoxins (B1, B2 and B3) which are produced by several *Fusarium* species. Fumonisins affect primarily corn and are brought on by drought stress followed by warm wet weather. They have been known to cause pulmonary edema in swine and esophageal cancer in humans.

**OCHRATOXIN**

Ochratoxin A, B, and C are produced by some *Aspergillus* species and *Penicillium* species. Ochratoxin A is most prevalent and is a carcinogen.

**ZEARALENONE**

Zearalenone is produced by *Fusarium* species and is favored by cool wet weather. Zearalenone has negative effects on the reproductive system of mammals.

**T-2 TOXIN**

T-2 Toxin is a trichothecene produced by various *Fusarium* species and causes severe immunosuppression, vomiting and reduced feed intake.

**TESTING METHODS**

SGS utilizes both USDA-GIPSA validated ELISA (Enzyme Linked Immunosorbent Assay) testing methods and LC MSMS (Liquid Chromatography with tandem Mass Spectrometry), depending on the level of detection and quantification needed.

LC MSMS technology allows for differentiation of mycotoxins within a group and offers very accurate results with a turnaround time of 4 days. ELISA testing returns next-day results and is used as a quick screening method.

SGS reports results quantitatively for both methods, and results are reported as parts per million (ppm) or parts per billion (ppb) depending on the mycotoxin tested.

**CONTACT DETAILS**

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