Dept. 7691, Fargo, ND 58108-6050 t: (701) 231-7527 f: (701) 231-7514 e: ndsu.vetlab@ndsu.edu

Date > 12/29/20 Accession No. > **20-12745** 

Ref. Vet > TIM EVANS Sample(s) Collected > Ref. ID >

Bill To > MISSOURI VET DIAG LAB Sample(s) Received > 12/28/20 Type > Feed

MISSOURI VET DIAG LAB PO BOX 6023 COLUMBIA, MO 65205 JEREMY SIMMONS NO ADDRESS PROVIDED

# **Final Report**

## **Toxicology**

Mycotoxin Screen LC/MS/MS

Mycotoxin	PQL	1. 20-26323 Top/Bottom	2. 20-26323 Top2/Bottom2
Aflatoxin B1	20 ppb	525 ppb	380 ppb
Aflatoxin B2	20 ppb	41 ppb	33 ppb
Aflatoxin G1	20 ppb	< 20 ppb	< 20 ppb
Aflatoxin G2	20 ppb	< 20 ppb	< 20 ppb
Fumonisin B1	200 ppb	2054 ppb	1866 ppb
Fumonisin B2	200 ppb	472 ppb	411 ppb
HT-2 Toxin	200 ppb	< 200 ppb	< 200 ppb
T-2 Toxin	20 ppb	< 20 ppb	< 20 ppb
Ochratoxin A	20 ppb	24 ppb	21 ppb
Sterigmatocystin	20 ppb	< 20 ppb	< 20 ppb
Zearalenone	100 ppb	< 100 ppb	< 100 ppb
Vomitoxin	200 ppb	< 200 ppb	< 200 ppb

## Comments:

#### Stop feeding the dog food to animals.

#20-26323 Top/Bottom

Total aflatoxins 525  $\mu$ g/Kg (ppb) aflatoxin B1 and 41  $\mu$ g/Kg aflatoxin B2 = 566  $\mu$ g/kg. Total fumonisins 2054  $\mu$ g/Kg fumonisin B1 and 472  $\mu$ g/kg fumonisin B2 = 2526  $\mu$ g/kg or 2.5 ppm (parts per million). Ochratoxin A detected at 24  $\mu$ g/kg.

#20-26323 Top2/Bottom2

Total aflatoxins 380  $\mu$ g/Kg (ppb) aflatoxin B1 and 33  $\mu$ g/Kg aflatoxin B2 = 413  $\mu$ g/kg. Total fumonisins 1866  $\mu$ g/Kg fumonisin B1 and 411  $\mu$ g/kg fumonisin B2 = 2277 u/kg or 2.3 ppm (parts per million). Ochratoxin A detected at 21 ug/kg.

### The FDA action level of aflatoxins in pet foods is at 20 ppb.

The FDA guidance level for fumonisins in the complete feed of pet animals is at 5 ppm. [Note that fumonisins may cause some level of hepatic damage in most species of animals. The possible interaction of fumonisins and aflatoxins in causing hepatic damage in pet animals is not well documented].

The FDA does not have guidelines for ochratoxins in animal feeds. Ochratoxin A is recognized as being nephrotoxic, immunosuppressive, and a possible carcinogen. The European Union has set a guidance value in mg/kg of Ochratoxin A in compound feed for cats and dogs at 0,01 or 10  $\mu g/kg$  (ppb).

The samples were tested on an as received basis. The Practical Quantitation Limit (PQL) for the listed Mycotoxins is provided in ppb. For your information, 20 ppb = 0.020 ppm, 200 ppb = 0.20 ppm, and 2000 ppb = 0.00 ppm.

The Mycotoxins are extracted in acetonitrile:water followed by Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) detection.

Feed samples are routinely kept for 4 weeks after analysis unless we are specifically advised to the contrary. These results are intended for livestock diagnostic use.

cc: BENJAMIN LANDERS

This report was authorized by:

M.S. Mostrom, DVM, PhD Diplomate ABVT, ABT(1995-2020)

- End of Report -