

# Fumo- $\gamma$ ™ ONE

QUANTITATIVE STRIP TESTS

Equivalence



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# Precise, On-Site Fumonisin Results for Animal Feeds and Pet Food



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**Fumo-V<sup>TM</sup> ONE**  
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# Fumo-V ONE Procedure with Vertu TOUCH Reader

Barcode D: LOD: 0.5ppm  
Range: 0-30 ppm



Weigh 5 grams of sample into Vertu PREP Tube



Add 30 mL of purified water;  
mix 90 seconds



Filter



Add 200  $\mu\text{L}$  ONE Diluent + 100  $\mu\text{L}$   
filtered extract to strip test vial



Mix well by shaking 3 times



Transfer 100  $\mu\text{L}$  of diluted extract  
to Fumo-V strip; wait 5 minutes;  
insert strip in Vertu TOUCH reader



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## Total fumonisin determination using Fumo-V ONE for finished feeds, with a range of 0.5–30 ppm in finished feeds

Feed Sample	Reference Result	Mean* (ppm)	Recovery (%)
Cat 1	1.4	1.5	111
Cat 2	1.4	1.6	115
Cattle*	1.9	2.2	116
Corn 1	4.9	5.0	102
Corn 2	27.8	31.2	112
Dog 1	1	0.9	93
Dog 2	1	1.1	112
Goat 1	1.2	1.3	108
Goat 2	1.2	1.2	102
Horse	2.0	1.8	90
Poultry	3.4	3.8	114
Puppy	1.0	1.1	104
Swine 1	5.8	5.5	95
Swine 2	1.3	1.6	104

\* Cattle feed result represents spiked sample with adjusted result value.



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## Linearity and test range in feeds:

Three representative feed samples (cattle, fish and a generic feed) with background contamination below 0.20 ppm were examined using Fumo-V ONE in the range of 0 to 30 parts per million (ppm).

**Table 1: Linearity testing range in cattle feed: 0-30 ppm**

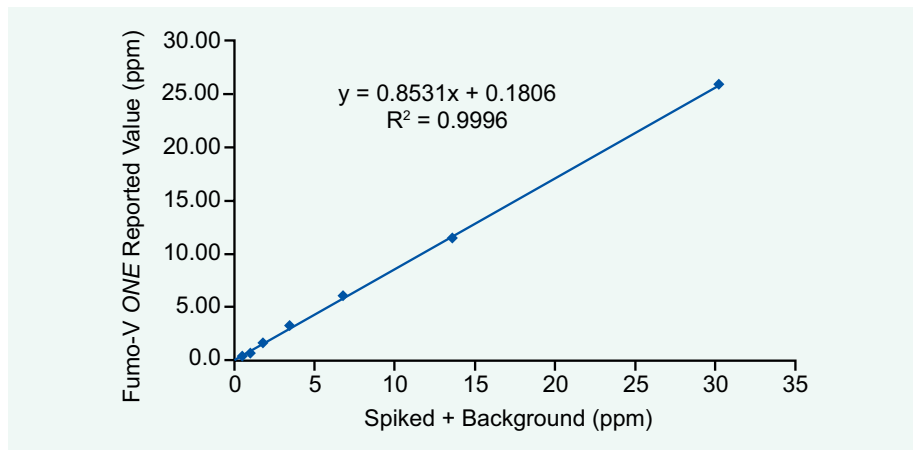
Spike (ppm)	Mean (ppm)	STD	CV%	Recovery (%)
0.5	0.5	0.0	1	101
0.9	0.8	0.08	10	86
1.8	1.7	0.07	4	98
3.4	3.4	0.26	8	98
6.8	6.1	0.29	5	90
14	11	0.06	1	85
30	26	0.81	3	86



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## Linearity and test range in feeds – continued:

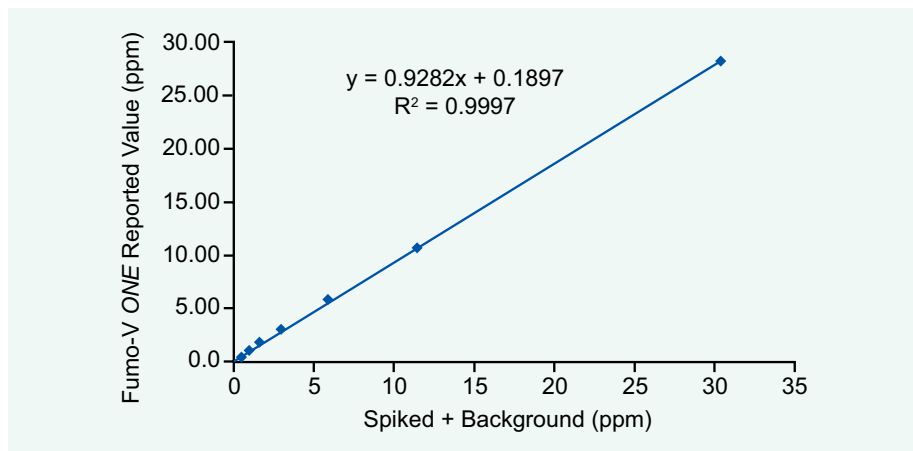
**Figure 1: Linearity of Fumo-V ONE test ranging from 0 to 30 parts per million (ppm) in corn and feeds**



The correlation coefficient ( $R^2$ ) for the Fumo-V ONE method from 0 to 30 parts per million in cattle feed is 0.9996, indicating that the linearity of the method is excellent for the range of 0 to 30 ppm.

**Table 2: Linearity testing range in spiked fish feed: 0-30 ppm**

Adjusted Spike (ppm)	Mean (ppm)	STD	CV%	Recovery (%)
0.59	0.5	0.1	11	75
1.0	1.0	0.1	11	105
1.9	2.0	0.1	4	106
3.5	3.5	0.2	6	98
6.9	6.6	0.5	7	96
14	12.0	0.1	1	87
30	29.0	0.5	2	94

**Figure 2: Linearity of Fumo-V ONE in spiked fish feed: 0-30 ppm**

# Conclusion

## **Limit of detection**

Fumo-V ONE provides fully quantitative fumonisin determination in the range of 0–30 ppm (LOD 0.5 ppm) using Barcode D for complete feeds and pet foods.

## **Linearity, test range, and recovery**

Fumo-V ONE provides excellent linearity for fumonisin rapid screening test in the range of 0 to 30 ppm with the recovery rate of 75–124% in animal feeds examined.

## **Accuracy and reproducibility with different lots, operators and readers**

Feed samples and LC reference samples were tested using Fumo-V *ONE* and the results are accurate (matching well with LC results) and reproducible (low CV%).

\* Additional data available upon request.







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