High Speed Analysis of Mycotoxins
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Introduction
Mycotoxins are minor components in weights of commodities products by large and are a fraction of their respective aflatoxins. Mycotoxins are typically found in foods, grains, feeds, grains, and other agricultural products. High speed analysis of mycotoxins can greatly help producers of food commodities stay ahead of the competition and provide an added measure of confidence.

Mycotoxins Tested
- Aflatoxin B1
- Aflatoxin B2
- Aflatoxin G1
- Aflatoxin G2
- Fumonisin B1
- Ochratoxin A
- Zearalenone

Method Conditions
- Injection solvent: 80/20 5 mM ammonium acetate/methanol
- Temperature: 50 °C
- Flow rate: 0.4 mL/min
- Mobile phase: Isocratic 70/30 H2O/50-50 ACN-MeOH
- Ex/Em: 365/450 nm

Calibration Curves

Mycotoxin Standards

Untargeted Screening

Untargeted Screening

Sample Agreement

Untargeted Screening

Discussion

Discussion

Conclusion

Conclusion

High Throughput UHPLC

Library Match

Library Match

Table 1: Concentration of Standards (ppb)

Table 2: MRM Parameters

Table 3: Measured and Expected Amounts of Mycotoxins in Each Grain Sample. Expected Values Based on Measurement by an Independent Method

Table 4: Concentrations of Standards (ppb)

Table 5: MRM Parameters Reference Samples

Table 6: Accuracy

Table 7: Calibration Curves

Figure 1: Structure of mycotoxins

Figure 2: Chromatogram of Mycotoxin Standards

Figure 3: Total Ion Chromatogram From a Feed-Corn Sample. The Peak at 2.25 Minutes

Figure 4: Survey Scans of Peak A

Figure 5: Survey Scans of Peak A

Figure 6: Survey Scans of Peak A

Figure 7: Survey Scans of Peak A

Figure 8: Survey Scans of Peak A

Figure 9: Survey Scans of Peak A