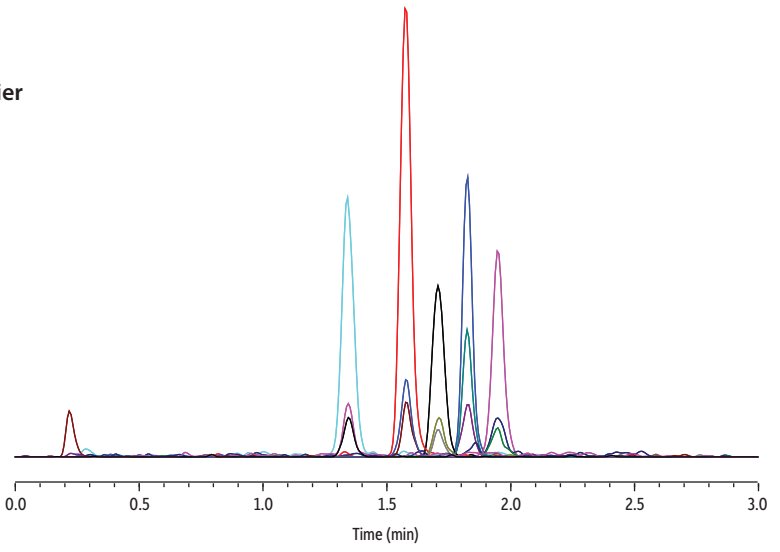
Mycotoxins (STD 1 - 2 ng/g) in MCT Oil on Raptor Biphenyl by LC-MS/MS

- 3-minute cycle time.
- Simplified sample cleanup.
- Sensitivity needed for mid-tier LC-MS/MS platforms.



Peaks	t_R (min)	Precursor Ion	Product Ion 1	Product Ion 2
1. Aflatoxin G2-13C17	1.340	348.3	330.3	-
2. Aflatoxin G2	1.344	331.2	189.3	115.2
3. Aflatoxin G1-13C17	1.576	346.3	257.3	-
4. Aflatoxin G1	1.579	329.2	243.2	215.3
5. Aflatoxin B2-13C17	1.707	332.3	303.3	-
6. Aflatoxin B2	1.711	315.3	287.2	243.3
7. Ochratoxin A	1.824	404.3	239.1	358.3
8. Ochratoxin A-13C20	1.825	424.3	250.2	-
9. Aflatoxin B1	1.946	313.2	241.2	128.2
10. Aflatoxin B1-13C17	1.948	330.3	301.4	-

Column Raptor Biphenyl (cat.# 9309A52)
Dimensions: 50 mm x 2.1 mm ID
Particle Size: 2.7 µm
Pore Size: 90 Å
Guard Column: Raptor Biphenyl EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 µm (cat.# 9309A0252)
Temp.: 35 °C
Standard/Sample
Diluent: 45:55 Water:Methanol
Conc.: 2 ng/g
Inj. Vol.: 5 µL
Mobile Phase
A: Water, 2 mM ammonium formate, 0.1% formic acid
B: Methanol, 2 mM ammonium formate, 0.1% formic acid

Time (min)	Flow (mL/min)	%A	%B
0.00	0.7	35	65
2.00	0.7	10	90
2.01	0.7	35	65
3.00	0.7	35	65

Detector MS/MS
Ion Mode: ESI+
Mode: MRM
Instrument UHPLC
Sample Preparation A working calibration solution containing Aflatoxin B1, B2, G1, and G2 and Ochratoxin A was prepared at 50.0 ng/mL in methanol. 0.25 g of MCT oil was spiked to 2 ng/g using 10 µL of the working calibration solution. A working internal standard was prepared using 13C labeled analogs at a concentration of 250 ng/mL in methanol. 10 µL of the working internal standard was aliquoted into the sample followed by vortexing for 10 seconds at 3000 rpm. 1 mL of 45:55 H_2O:MeOH was added to the sample. The sample was vortexed for 30 seconds at 3000 rpm. The sample was then centrifuged at 3000 xg for 5 min. at 10 °C. 750 µL of the supernatant was transferred to a conditioned (1 mL 45:55 water:methanol) Resprep bonded reversed phase SPE cartridge (Restek cat.# 26030). The sample was pulled through under vacuum into an autosampler vial for LC-MS/MS analysis.