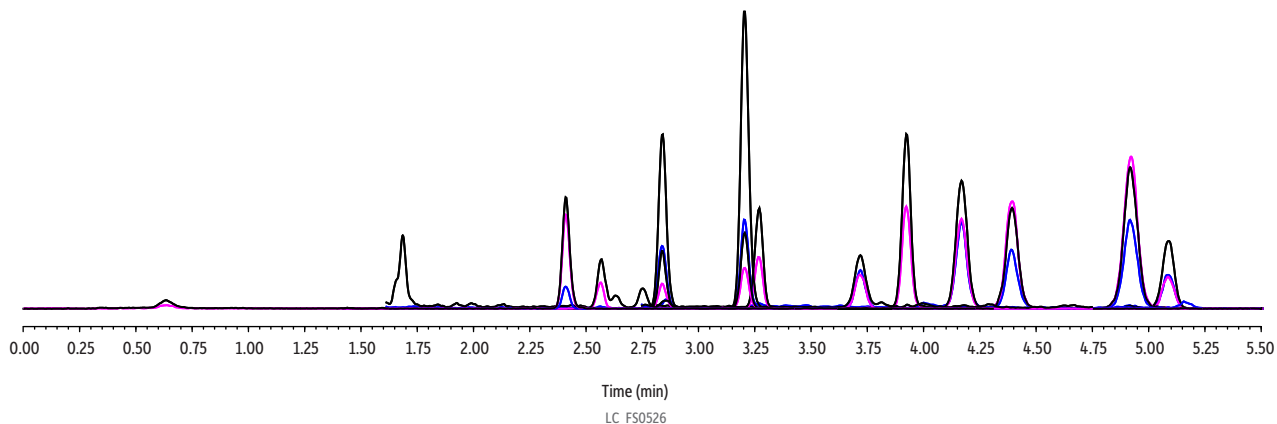


Mycotoxins in Peanut Powder on Raptor Biphenyl by LC-MS/MS

- 7-minute cycle time.
- Baseline separation of 12 FDA-regulated mycotoxins in peanut powder.
- Easy sample preparation (dilute-filter-shoot).



Peaks	tr (min)	Conc. (ng/g)	Precursor Ion	Product Ion 1	Product Ion 2
1. Deoxynivalenol	0.62	50	297.3	249.3	231.2
2. Fumonisin B1	2.45	50	722.5	352.4	334.5
3. HT-2	2.60	50	447.3	345.3	285.3
4. Fumonisin B3	2.85	50	706.5	336.4	318.4
5. Fumonisin B2	3.23	50	706.5	336.3	141.2
6. T2	3.31	50	489.3	245.2	387.4
7. Aflatoxin G2	3.74	5	331.2	313.3	189.3
8. Zearalenone	3.96	50	319.3	283.3	187.2
9. Aflatoxin G1	4.22	5	329.2	243.2	200.2
10. Aflatoxin B2	4.43	5	315.3	287.3	259.2
11. Aflatoxin B1	4.99	5	313.3	285.2	241.2
12. Ochratoxin A	5.19	5	404.2	239.3	358.3

Matrix interference was observed for HT-2 transition 447.3-285.3 in peanut powder. Therefore, 447.3-345.3 was chose for quantification.

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.: 40 °C
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	0.5	70	30
0.6	0.5	70	30
0.7	0.5	50	50
3.0	0.5	25	70
4.5	0.5	25	75
5.0	0.5	10	90
5.2	0.5	10	90
5.21	0.5	25	75
6.00	0.5	25	75
6.01	0.5	70	30
7.00	0.5	70	30

Detector MS/MS
Ion Mode: ESI+
Mode: MRM
Instrument UHPLC

Sample Preparation Weighed 1.00 gram of peanut powder in a 50 mL centrifuge tube and added 2.00 mL of water. Vortexed at 3000 rpm for 5 min followed by the addition of 4.0 mL of extraction solvent (50:50 water:acetonitrile, v/v). The tube was then vortexed at 3000 rpm for 5 min followed by centrifugation for 15 min at 4200 rpm. 475 µL of the supernatant was filtered through a Thomson SINGLE StEP Nano filter vial (0.2 µm, cat.# 25882). The sample was then fortified with 25 µL of a standard solution prepared in water at 1000 ng/mL (100 ng/mL for aflatoxins and ochratoxin A) as part of the matrix-matched calibration curve. Vortexed at 3000 rpm for 1 min prior to analysis.

Notes Want even better performance when analyzing metal-sensitive compounds? Check out Inert LC columns at www.restek.com/inert