Pretreatment

1. Add 5 g of sodium hydroxide to 20 g of homogenized sample, followed by 30 mL of n-hexane.
2. Add 100 mL 60% aqueous methanol and homogenize.
3. Ultrasonicate for 30 minutes.
4. Filter sample through 15 cm filter paper.
5. Take 1 mL aliquot from 60% methanol layer for SPE cleanup.

SPE Procedure

Oasis® HLB 1cc/30 mg

CONDITION/EQUILIBRATE:
A.1 mL methanol
B. 1 mL water

↓

LOAD:
1 mL sample

↓

WASH:
1 mL water

↓

ELUTE:
1 mL methanol

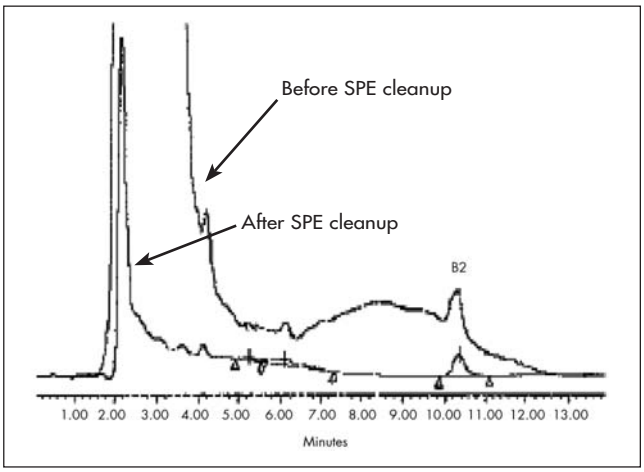
↓

Reconstitute to 2 mL with methanol

LC Conditions

Instrument:	Waters Alliance® HPLC 2695 System
Column:	SymmetryShield™ RP18, 4.6 x 150 mm, 5 µm
Flow rate of iodine:	0.2 mL
Flow rate:	1 mL/min
Mobile phase:	A. methanol B. water
Isocratic gradient:	35% A: 65% B, for 20 minutes
Column temperature:	30 °C
Derivatization temperature:	80 °C
Excitation wavelength:	365 nm
Emission wavelength:	455 nm
Post-column derivatizaton reagent:	Dissolve 200 mg iodine in 10 mL methanol, top up 1000 mL with water
Detector:	2475 Multi Wavelength Fluorescence

Results



Matrix interference is greatly reduced when sample is cleaned up by using Oasis HLB SPE cartridge.

Analyte	Recovery %	Detection(p/µg kg)
Aflatoxin G2	101± 7.18	0.11
Aflatoxin G1	72.8±3.63	0.20
Aflatoxin B2	97.5±5.48	0.12
Aflatoxin B1	68.8±5.48	0.24

Results of B1, B2, G1, G2 in peanuts (n=5).

Ordering Information

Description	Part Number
Oasis HLB, 1 cc/30 mg, 30 µm, 100/box	WAT094225
SymmetryShield RP18, 4.6 x 150 mm, 5 µm	186000109
LCMS Certified Combination Packs	600000751CV

Ref: YU Yanbin[1], WAN Shuwei[1], TAN Peigong[2], WANG Xiaogang[1], MIAO Zaijing[1], (1. Ministry of Agriculture, Qingdao, 2. Environmental Protection Agency, Qingdao)