



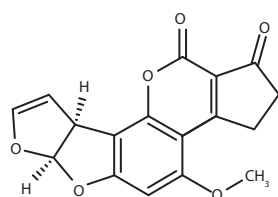
AFLATOXINS AND OCHRATOXIN BY HPLC/FLD

INTRODUCTION

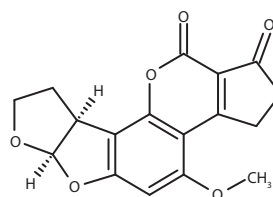
Aflatoxin is a Group 1 carcinogen and is a product of mould. Ochratoxin is a mycotoxin produced by the fungus *Aspergillus ochraceus* and also by several species of *Penicillium fungi*. It is considered a potential carcinogen and has been known to cause kidney damage. All these mycotoxins are monitored worldwide and allowed concentration limits depend not only on the territory, but also on the food/feed matrix and are given by local administrations.

Substance: Aflatoxin B1, CAS number 1162-65-8
Aflatoxin B2, CAS number 7220-81-7
Aflatoxin G1, CAS number 1165-39-5
Aflatoxin G2, CAS number 7241-98-7
Ochratoxin A, CAS number 303-47-9

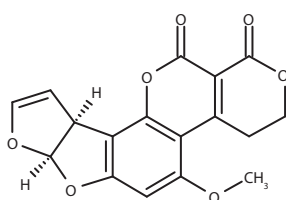
Formula: 4-Methoxy-2,3,6a,9a-tetrahydrocyclopenta[c]furo[3',2':4,5]furo[2,3-h]chromene-1,11-dione (6aR,9aS)-4-Methoxy-2,3,6a,8,9,9a-hexahydrocyclopenta[c]furo[3',2':4,5]furo[2,3-h]chromene-1,11-dione (7aR,10aS)-5-Methoxy-3,4,7a,10a-tetrahydro-1H,12H-furo[3',2':4,5]furo[2,3-h]pyrano[3,4-c]chromene-1,12-dione 5-Methoxy-3,4,7a,9,10,10a-hexahydro-1H,12H-furo[3',2':4,5]furo[2,3-h]pyrano[3,4-c]chromene-1,12-dione N-[[[(3R)-5-chloro-8-hydroxy-3-methyl-1-oxo-3,4-dihydro-1H-isochromen-7-yl]carbonyl]-L-phenylalanine



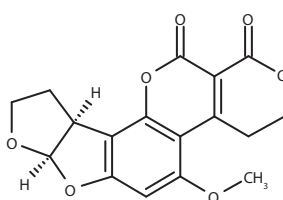
Aflatoxin B1



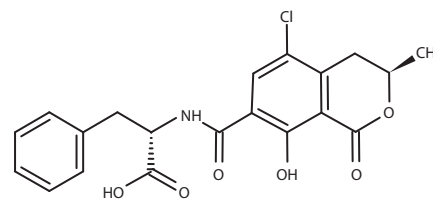
Aflatoxin B2



Aflatoxin G1



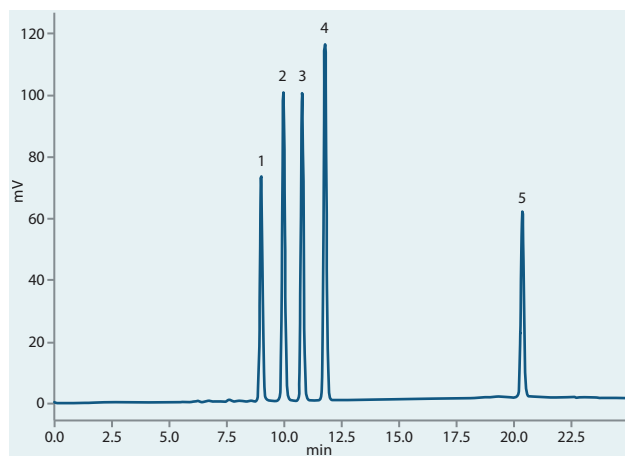
Aflatoxin G2



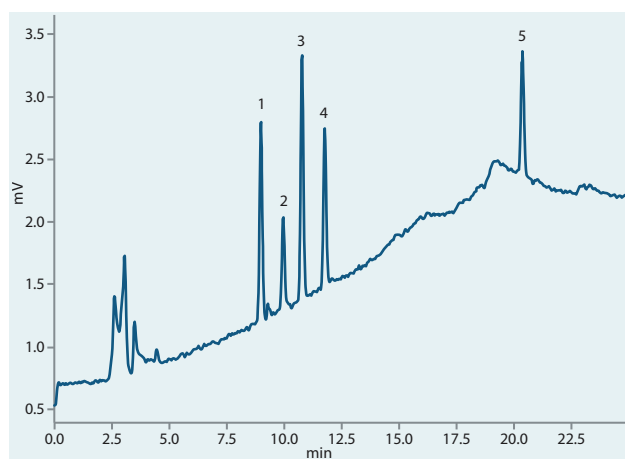
Ochratoxin A



AFLATOXINS AND OCHRATOXIN BY HPLC/FLD



Standard mixture on ARION® Polar C18 column



Analysis of pepper on ARION® Polar C18 column

Column	ARION® Polar C18, 3.0 µm			
Dimensions	150 mm × 4.6 mm			
Part number	ARI-5721-IK46			
Mobile phase	A: 0.5% acetic acid / 5% ACN in water B: Methanol C: ACN			
Gradient elution	Time	A (%)	B (%)	C (%)
	0	65	30	5
	15	50	0	50
	25	50	0	50
	30	65	30	5
Flow rate	1.0 ml/min			
Temperature	40 °C			
Detection	FLD after post-column derivatisation			
Detector setup	Time	Excitation λ	Emission λ	PMT-Gain
	0	364 nm	455 nm	14
	15	330 nm	455 nm	14
Injection volume	20 µl			
Analytes	1. Aflatoxin G2 2. Aflatoxin G1 3. Aflatoxin B2 4. Aflatoxin B1 5. Ochratoxin A			

Note: Pepper sample was cleaned-up by means of Vicam immunoaffinity column.

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