

Matrix of the Month

June 2014:

Aflatoxin A in Beer

**Aflatoxin-Analysis during the
halftime of the World Cup 2014!**

*Sample loading, rinsing and
eluting in less than 15 minutes!*



Do you have a special matrix that we should test for mycotoxins?
Please let us know and write an e-mail to info@LCTech.de!

Protocol

Degas 12 mL beer and dilute the extract with 12+48mL PBS buffer.

In case of a precipitate or turbidity, filtrate the sample.

Apply 10 mL of the extract to the AflaCLEAN SMART column. A maximum flow rate of 3 mL/min should not be exceeded.

After sample loading rinse the sample container with 2 mL water and apply the purge solvent also to the IAC column.

Dry the column with a gently air-flow and elute it with 2 x 1 mL methanol. Please keep in mind that the column bed is incubated with methanol for at least 5 minutes in order to ensure the complete denaturation of the antibody.

HPLC Conditions

Aflatoxin B, G

HPLC: Isocratic

Column oven: 36 °C

Separation column: RP C18 (e.g. P/N 10522)

Flow rate: 1.2 mL/min, water/methanol/acetonitrile (60/30/15 (v/v/v))

Fluorescence detection: photochemical derivatisation with UVE

Excitation wavelength: 365 nm

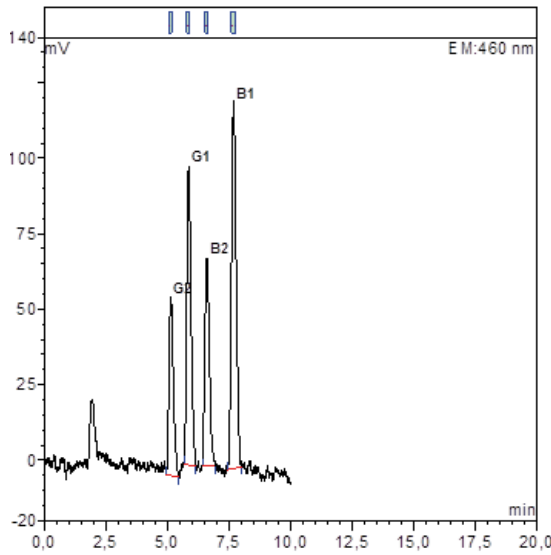
Emission wavelength: 460 nm

Recovery Rates

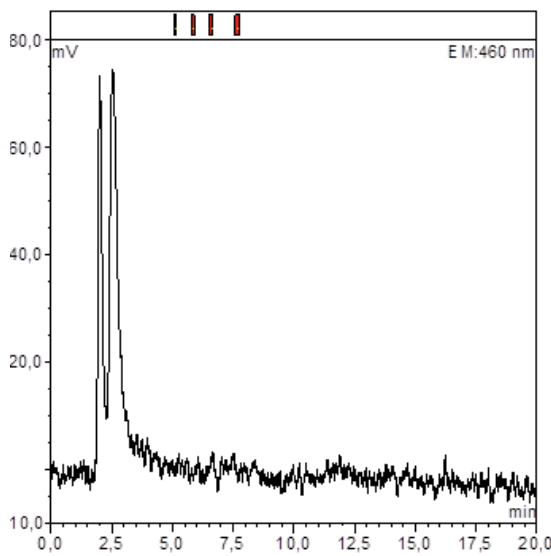
Content of Aflatoxins B1, B2, G1 and G2 in Beer				
	Aflatoxin			
	B1	B2	G1	G2
Standard*	100	100	100	100
Recovery rate** Beer 1 ppb	105	100	107	93

* Standard is set = 100 % , ** corrected with non-spiked sample

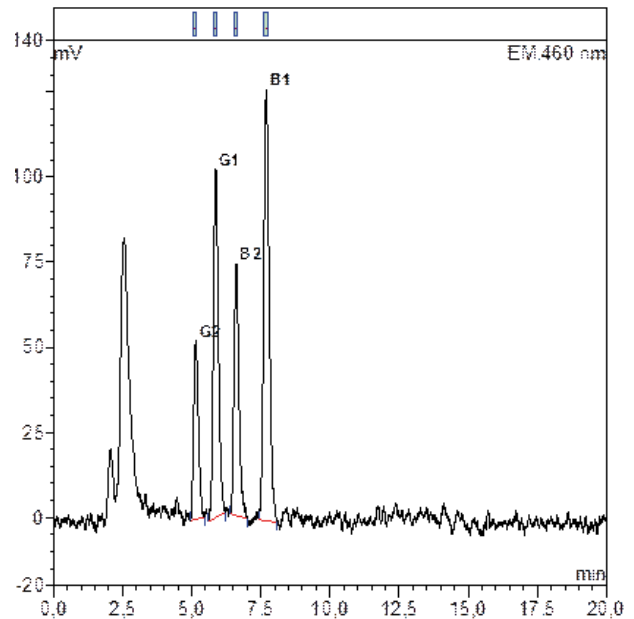
Chromatograms



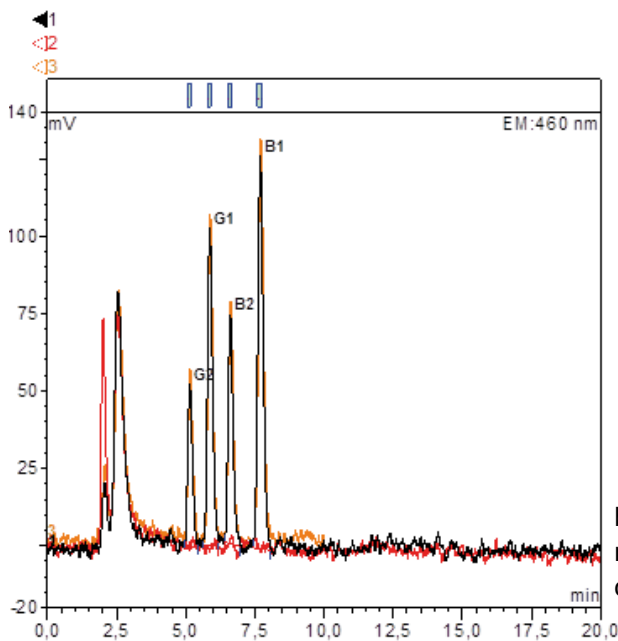
10 ng 2 mL Standard



Beer non spiked (blank value)



Beer spiked with 1 ppb Aflatoxin



Aflatoxin B1, B2, G1, G2:
Overlay of the chromatograms

black - standard
red - blank value
orange - beer 1 ppb

These LCTech products were used:

AflaCLEAN SMART,
Immunoaffinity column
for Aflatoxin B1, B2, G1, G2

P/N 12862 / 12863

HPLC column,
for mycotoxin analysis

P/N 10522

UVE,
Photochemical reactor
for the analysis of Aflatoxins

P/N 10519

Do you have further questions?
Please just write an e-mail to info@LCTech.de