

Matrix of the Month

July 2014:

**Aflatoxin M1
in Milk**

**processed with
FREESTYLE ThermELUTE™**



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

Adjust a minimum of 10 mL milk to room temperature centrifuge them at 2000 x g and eliminate the fat layer.

Dilute the milk with PBS buffer (pH 7.2) 1:2.

Apply 20 mL (represent 10 mL milk) to the AflaCLEAN M1 SMART column using FREESTYLE ThermELUTE™.

Wash the column with 4 mL water and inject the eluate afterwards directly into the HPLC by ThermELUTE™ technology.

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: without derivatisation

Excitation wavelength: 365 nm

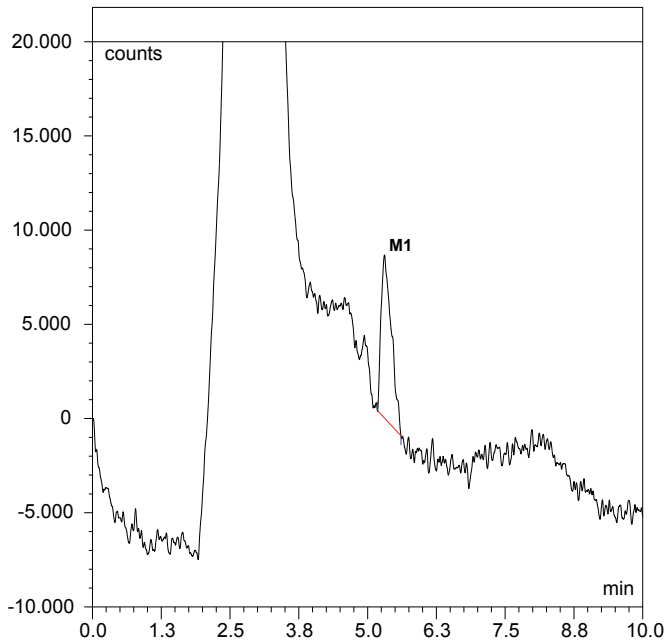
Emission wavelength: 435 nm

Recovery Rates

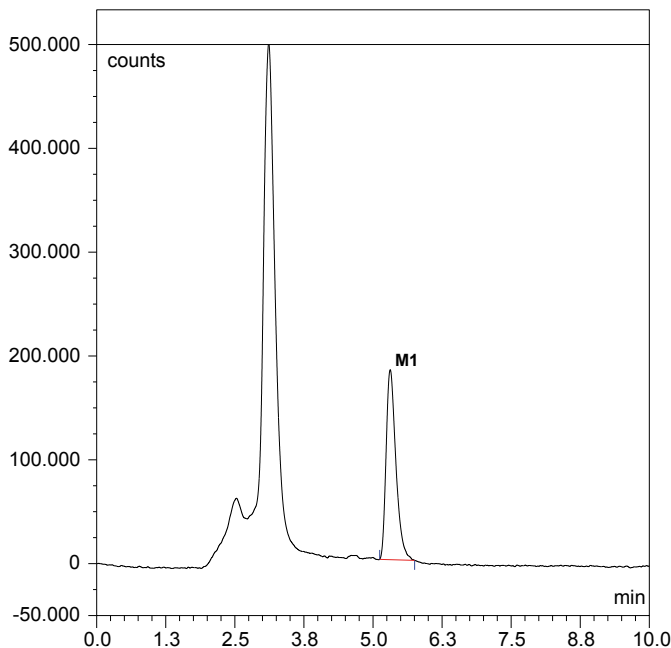
Content of Aflatoxins M1 in Milk	
	Aflatoxin M1
Standard*	100
Recovery rate** Milk 0.02 ppb	99

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

Chromatograms



Milk 10 mL spiked with 1 ppt Aflatoxin M1



Milk 10 mL spiked with 20 ppt Aflatoxin M1



FREESTYLE ThermELUTE™



FREESTYLE ThermELUTE™ with SMART column



FREESTYLE ThermELUTE™ injects the eluate from SMART column

These LCTech products were used:

AflaCLEAN M1 SMART, Immunoaffinity column for Aflatoxin M1

P/N 14246 / 14248

HPLC column, for mycotoxin analysis

P/N 10522

FREESTYLE ThermELUTE™ robotic system for sample preparation

P/N 12663, 12668, 13691

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