

DETERMINATION OF OCHRATOXIN A IN PEPPER OR NUTMEG

Regulations for pepper:

Europe (EC 594/2012) : 15µg/Kg

PROTOCOL OF PURIFICATION

Sample preparation

10g of finely ground spices are mixed with 100mL of extraction solvent (1% NaHCO₃ in water) during 30 minute using magnetic stirring. The extract is filtered through a filter paper.

Then, 20mL of the extract is diluted with 20mL of HCl solution pH=1, 0.1M. After a filtration through a filter paper, this solution is used as the loading solution

Purification with a 6mL AFFINIMIP® SPE Ochratoxin A – SPICES cartridge

Equilibration

- 4mL Acetonitrile
- 4mL Water

Loading

- 20mL of loading solution (eq. 1g sample)

Washing of interferences (W1)

- 12mL 60/40 HCl solution pH 1, 0.1M/ACN
- 5mL buffer ammonium formate pH 7.4 30mM

Drying 10 min under vacuum

Washing of interferences (W2)

- 6mL ACN

Elution (E)

- 2mL Methanol – 2% Acetic acid

The elution fraction was then evaporated and dissolved in water before HPLC analysis.

HPLC Method with Fluorescence detection

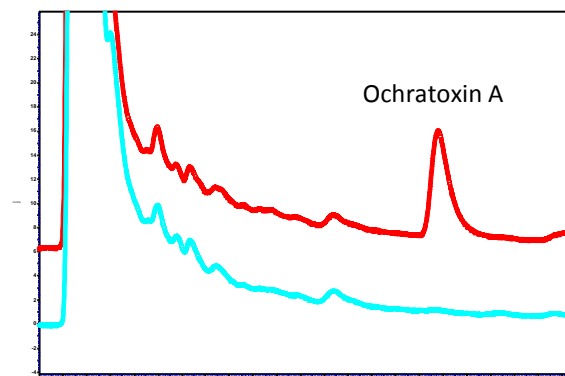
Column: Hypersil Gold C18 column 150mm x 2.1mm
Mobile phase: water/acetic acid/MeOH (47/1/52, v/v)

Flow rate: 0.2mL/min

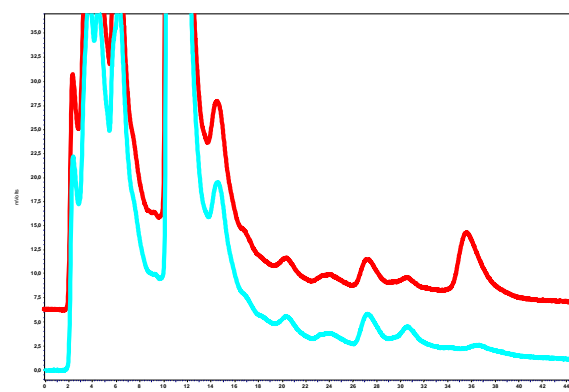
Fluorescence detection: excitation/emission wavelengths: 333 / 460nm

Injection volume: 20µL.

RESULTS



Chromatogram obtained after purification of nutmeg (spiked at 15µg / kg (red) or not contaminated (blue)) with AFFINIMIP® SPE Ochratoxin A- Spices



Chromatogram obtained after purification of white pepper (spiked at 15µg / kg (red) or not spiked (blue)) with AFFINIMIP® SPE Ochratoxin A- Spices

Catalog number:

FS101PP-02 for 25 cartridges

FS101PP-03 for 50 cartridges