

DETERMINATION OF OCHRATOXIN A IN CEREALS

Regulations for unprocessed cereals:

Europe (EC 1881/2006) : 5µg/Kg
Codex Alimentarius Standard: 5µg/Kg for raw wheat

PROTOCOL OF PURIFICATION

Sample preparation

50g of finely ground wheat are mixed during 1 minute in a blender with 100mL of extraction solvent (60/40 Acetonitrile/deionized Water). The extract is filtered through a filter paper. Then, 5mL of the extract is diluted with 5mL 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 3mL/100mg AFFINIMIP® SPE Ochratoxin A cartridge

Equilibration

- 4mL Acetonitrile
- 4mL Water

Loading

- 4mL of loading solution (eq. 1g wheat)

Washing of interferents

- 7mL 60/40 HCl solution pH 1, 0.1M/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

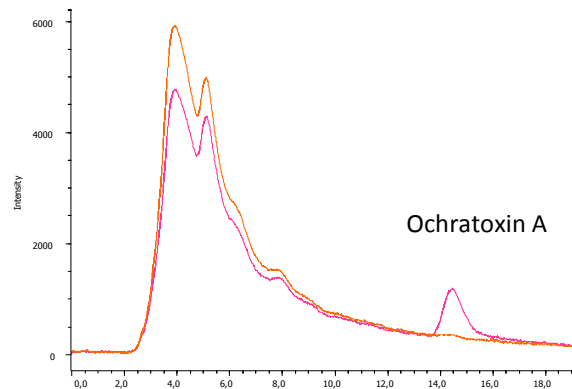
Column: Hypersil Gold C18 column 150mm x 2.1mm
Mobile phase: water/acetic acid/MeOH (39/1/60, v/v)

Flow rate: 0.2mL/min

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

Injection volume: 20µL.

RESULTS



Chromatogram obtained after purification of wheat (spiked at 5µg / kg (pink) or not contaminated (orange)) with AFFINIMIP® SPE Ochratoxin A

Recoveries of Ochratoxin A after AFFINIMIP® SPE Ochratoxin A Clean-up in wheat (n=6)

C° (µg/kg)	Recoveries %	% RSD
5	96.3	7.7

Catalog number:

FS101-02 for 25 cartridges

FS101-03 for 50 cartridges