DETERMINATION OF PATULIN IN TOMATO KETCHUP AND TOMATO POWDER

PROTOCOL OF PURIFICATION

Sample preparation

Preparation OF TOMATO KETCHUP

10g tomato ketchup and 10mL water are mixed with 150µL pectinase solution and left overnight at RT before a filtration with filter 0.2µm to obtain the loading solution.

Preparation OF TOMATO POWDER

10g tomato ketchup and 20mL water are mixed. 10g of the mixture, 10mL water and 150µL pectinase solution are left overnight at RT before a centrifugation at 4500rpm during 5 min. Then the mixture is filtered with filter 0.2µm to obtain the loading solution.

Purification with a 3mL/100mg AFFINIMIP® SPE Patulin cartridge

Equilibration

- 2mL Acetonitrile
- 1mL Water

Loading

- 5mL of loading solution from tomato ketchup or 2mL from tomato powder

Washing of interferents (W1)

- 4mL Water-1% Acetic Acid
- 4mL Water

Drying by applying vacuum 10 seconds

Washing of interferents (W2)

- 500µL Diethyl Ether

Elution (E)

- 2mL Ethyl Acetate

The elution fraction was then evaporated and dissolved in water containing 0.1% acetic acid before HPLC analysis.

HPLC Method

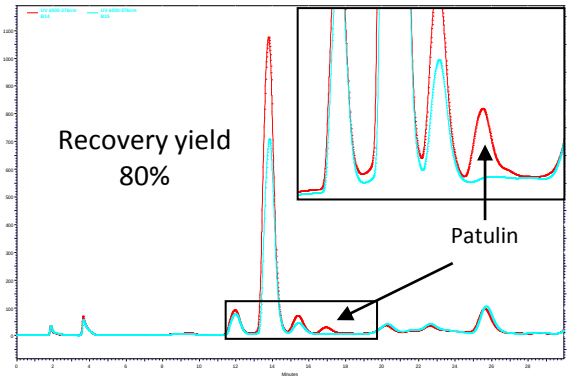
Column: Atlantis T3 column, 150mm x 2.1mm
Mobile phase: gradient profile

Time (min)	% water	% ACN
0	98	2
20	98	2
21	50	50
25	50	50
26	98	2

Flow rate: 0.2mL/min
Detection: UV - 276nm
Injection volume: 100µL.

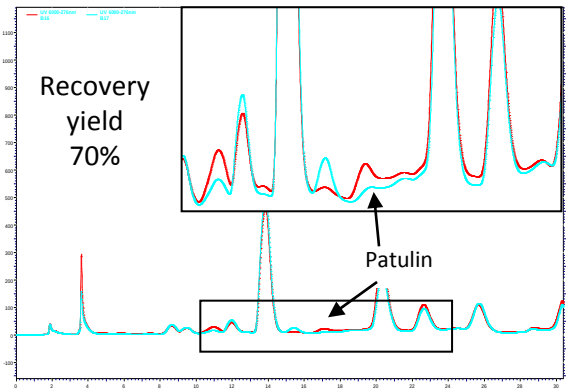
RESULTS

TOMATO KETCHUP



Chromatograms obtained after AFFINIMIP® SPE Patulin Clean-up of TOMATO KETCHUP spiked at 40µg/kg with Patulin (red) or not spiked (light blue).

TOMATO POWDER



Chromatograms obtained after AFFINIMIP® SPE Patulin Clean-up of TOMATO POWDER spiked at 36µg/kg with Patulin (red) or not spiked (light blue).

Catalog number:

3mL-100mg sorbent

FS102-02 for 25 cartridges
FS102-03 for 50 cartridges
FS102-02K for a kit of 25 cartridges + 50mL Pectinase
FS102-03K for a kit of 50 cartridges + 50mL Pectinase
REA-001-50mL for 50mL Pectinase solution