

Mycotoxins in Cereal, Shell fruit - separation of Aflatoxin - using a Purosher STAR RP-18e column - fluorescence detection

Chromatography

Substance class : Toxine
Matrix : CerealShell fruit

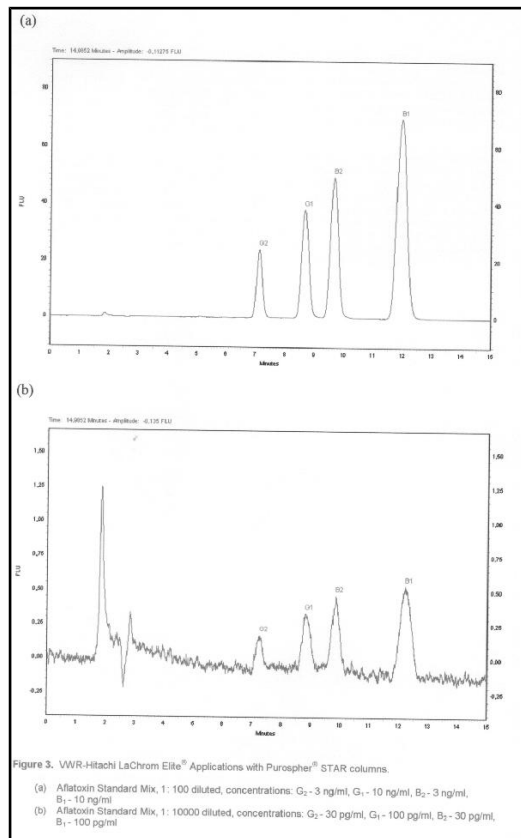
Chromatographic conditions

Column : LiChroCART® 150-4.6 Purosher® STAR RP-18 endcapped, 5 µm (Cat. No. 1.50358)
Precolumn : LiChroCART® 4-4 Purosher® STAR RP-18 endcapped, 5 µm (Cat. No. 1.50250)
Mobile Phase : Water/Acetonitrile/Methanol (65/17.5/17.5). Rinse the system after the sequence for 30 minutes with 90/10 water/Methanol (V/V)
Flow rate : 1 mL/min
Detection : Fluorescence detection EX 365 / EM 435 after post-column derivatization with Derivatisation reagent: saturated iodine solution) Reaction pump: The pump is stopped by timer of the L-2130 pump when the rinsing program is started. Never let this pump run, when the L-2130 pump is stopped. The iodine will damage your column !!! Derivatisation coil: PTFE knitted coil, 5 m x 0.5 mm I.D or selfmade PEEK coil 3 m x 0.5 mm I.D.
Temperature : 60°C
Inject. volume : 50 µL
Sample : (a) Aflatoxin Standard Mix, 1: 100 diluted, concentrations: G2 - 3 ng/ml, G1 - 10 ng/ml, B2 - 3 ng/ml, B1 - 10 ng/ml (b) Aflatoxin Standard Mix, 1: 10000 diluted, concentrations: G2 - 30 pg/ml, G1 - 100 pg/ml, B2 - 30 pg/ml, B1 - 100 pg/ml

Sample preparation

Extraction Weigh 25 g to the nearest 10 mg of the homogenized test sample into the blender jar. Add 5 g of sodium chloride and 125 ml of extraction solvent and homogenize with a mixer for 2 min at high speed. Filter through a fluted filter paper. Pipette 15 ml of the filtrate into a conical flask of appropriate size with glass stopper. Add 30 ml of water, stopper the flask and mix. Before starting affinity column chromatography, filter the diluted extract through a glass microfibre paper. The filtrate should be clear. If not, refilter. Proceed immediately in accordance with 5.2 Clean up Prepare the IA column and proceed with the clean up procedure in accordance with the manufacturer 's instructions. Pipette 15 of the filtrate from 5.1 into the solvent reservoir of the IA column. Collect the methanol or acetonitrile eluate (depending on the product instructions) in a 2 ml volumetric flask. Dilute to the mark with water. Mix and transfer into an autosampler vial.

Figure



Source

VWR Application Note, V. Eckert

Ordering Information

Product	Catalog No.
Purospher® STAR RP-18 endcapped (5µm) LiChroCART® 150-4.6 HPLC cartridge	150358
Purospher® STAR RP-18 endcapped (5 µm) LiChroCART® 4-4 HPLC guard column	150250