

PRODUCT DATA SHEET

Opr0020 Immunoaffinity columns for the purification of Ochratoxin

Immunoaffinity columns are reliable and designed for rapid and simple purification of ochratoxins A and C from extracts of foodstuffs. Immunoaffinity columns contain monoclonal antibody against ochratoxins, which are covalently bound to gel-particles.

Product details

Column	Opr0020-1: 5 x 1 ml Opr0020-3: 5 x 3 ml
Gel bed volume	Opr0020-1: 0.25 ml Opr0020-3: 0.5 ml
Antibody coupled on the gel	Monoclonal antibody against ochratoxins A and C.

Intended use

Immunoaffinity columns are intended for use in a wide range of commodities including cotton seeds, cereals, maize, peanuts, walnuts, pistachio... For this process, a representative sample of the commodity to be analysed is extracted with a mixture of solvent. The extract is filtered and then diluted with a buffer. The diluted extract can be run directly over the Immunoaffinity columns, in which the ochratoxins are bound and separated from the other substances of the extract. After a short rinsing phase isolated ochratoxins can be eluted using methanol. This eluate is suited for determining the concentration of ochratoxins directly with the HPLC.

Warnings and precautions

1. Mycotoxins are highly toxic substances! Please take care about protective measures.
2. Please decontaminate any equipment used with 4% solution of sodium hypochloride
3. Each Immunoaffinity column contains thimerosal.
4. Do not use the Immunoaffinity column after the expiration date indicated on the label.
5. Immunoaffinity columns are designed for single use only.

Recommended solvents and buffers

PBS - buffer (0.05 M / 0.15 M NaCl, pH 7.4).
Extraction solution: 60/40 (v/v) methanol/water.
All solvents and buffers should be at room temperature (22-28°C).

Storage

Stored at +4°C
Preservative: PBS 1X, 0, 02% thimerosal

Publications

1. CAST (Council for Agriculture Science and Technology)-report, Mycotoxins Risks in Plant, Animal, and Human, Jan. 2003
2. EC-Directive 95/53/EC, 16th July 1998, EC-Directive 2002/27/EC of 13th of March 2002, laying down the sampling methods and methods for analysis for the official control of the levels for certain contaminants in foodstuff (<http://vm.cfsan.fda.gov/>)
3. Tauchmann, F., et al; Alimenta 11, 85 (1972): protective measures
4. WHO/FAO, 2001. Safety evaluation of certain Mycotoxin in food. Prepared by the Fifty-sixth meeting of Joint FAO/WHO Expert committee of Food additives (JECFA), WHO Food Additives Series 47, p.128
5. EMAN, European Mycotoxin Awareness Network, Fact sheets on analytical methods, Fact sheet 1, Ochratoxin A, Extraction. <http://www.Lfra.co.uk>

Product type

Immunoaffinity column

Warning

This is a laboratory reagent. It is not to be administered to human or animals nor be used as a drug

Updated Version 16/07/2005 A

Covalab France
11, Avenue Albert Einstein
69100 Villeurbanne- France
Phone +33 (0) 437 654 230
Fax +33 (0) 437 289 416
Email pa@covalab.com
www.covalab.com

Covalab - UK Ltd
St John's Innovation Centre
Unit 75, Cowley Road
Cambridge, CB4 0WS - UK
Phone +44 (0) 1223 421055
Fax +44 (0) 1223 420844
Email enquiries@covalab.co.uk
www.covalab.co.uk

PROCEDURE



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1) EXTRACTION

For solid samples:

1. Weigh out 25 g of sample into a 250 ml Erlenmeyer flask or a half-pint blender jar.
2. Add 100 ml of extraction solution and stopper flask or seal blender jar.
3. Blend on high speed for 3 minutes or in case of fine powder shakes for 1 hour on a gyratory shaker.
4. Using a funnel, filter extract into a sample jar through qualitative filter paper. Liquid samples can be diluted directly with PBS, without preceding extraction. Any alcohol content in the sample must be considered in the calculation of the dilution, or the sample can be vaporized if necessary.

2) DILUTION OF THE EXTRACTS

The extract is diluted with PBS until the part of acetonitrile is not higher than 5 % (v/v). In case of methanol extracts the part of methanol can be up to 20 % (v/v). E.g. 4 ml extract (methanol/water) and 12 ml total PBS is adequate.

Please note, the pH of the diluted extract should be neutral. If necessary, neutralize with NaOH-solution.

3) SAMPLE APPLICATION

The column and the extract must be at room temperature. The column does not require rinsing before application of the diluted extract.

The diluted extract is applied until all has passed over the column.

4) WASH

After the diluted extract has completely passed through, the column must be washed. Immunoaffinity column should be washed with 2 x 10 ml of distilled or deionized water.

Any remaining liquid should be removed from the column through slight pressure from above or slight negative pressure from below.

5) ELUTION

For the elution of bound Ochratoxins use only water free methanol (HPLC grade).

Elute with 1.5 - 3 ml methanol/acetic acid 98/2, which should be applied to the column in several small portions (for example 3 x 0.5 ml). After the last portion is applied, the methanol still remaining in the column is pressed out and added to the remaining eluate.

This can be directly analyzed with HPLC. In case of low level contamination, the eluate can be dried down to dryness.

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Unit 75, Cowley Road
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