

RIDA®QUICK Hazelnut (R6803)

Nuts, kernels and seeds

The edible constituents originating from within a plant are termed as nuts, kernels and seeds for historical, botanical or morphological reasons. Also, seeds or kernels originating from stone, nut or capsule fruits are frequently known as nuts. The hazelnut is a classical nut fruit from the Betulaceae family.

Allergenic potential

As a result of their structural similarity with pollen, it is often the case that nuts, seeds and kernels lead to allergic cross-reactions in pollen allergy sufferers. Independent of such cross-reactions, foodstuffs or food components containing hazelnut can trigger allergies, sometimes of a severe nature, among sensitive persons. The fatal aspect of the hazelnut is that it retains its allergenic activity even after heating and processing and is therefore one of the most common food allergens.

Statutory regulations

As nuts, kernels and various seeds are not only becoming more popular as nibbles or snacks, but are also increasingly supple-

menting balanced meals therefore the risk of inadvertent consumption is on the increase.

Legislation has attempted to counter this with the new food labelling directive 2003/89/EC in effect since 25 November 2005; this commits food producers not only to specify potentially allergenic components in detail, but also to monitor these with the aid of analytical measurement methods. Fast and yet sensitive methods are frequently called for here.

The RIDA®QUICK Hazelnut Test (R6803) represents a fast and sensitive method of determination for detecting hazelnut or hazelnut components in foodstuffs. RIDA®QUICK Hazelnut is an immunochromatographic cartridge test containing 25 test cartridges, one for each determination. The test result is available after approx. 40 minutes. The time specified includes both the time for sample preparation and the time to carry out the test. Other advantages of RIDA®QUICK Hazelnut are that it is not only sensitive with its 5 ppm detection limit, but is applicable for many different sample matrices, such as cereals, bakery products, ice cream and chocolate.

EU wide mycotoxin maximum residue limits

In the following tables an overview is given of the actual and valid maximum residue limits for mycotoxin due to EU regulations:

Table 1: Aflatoxins

Mycotoxin	Matrices	EU regulation	Maximum level
Aflatoxin M ₁	milk	VO [(EG) Nr. 466/2001]	50 ng/l (ppt)
	newborn baby formula and infant formula, including newborn baby milk formula and follow-on milk	VO [(EG) Nr. 683/2004]	25 ng/kg (ppt)
	dietary foods for special medical purposes intended specifically for infants	VO [(EG) Nr. 683/2004]	25 ng/kg (ppt)
Aflatoxin B ₁	food, peanuts, shell fruits, dried fruits, cereals	VO [(EG) Nr. 2174/2003]	2 µg/kg (ppb)
	maize (unprocessed) and spices	VO [(EG) Nr. 2174/2003]	5 µg/kg (ppb)
	cereal and other complementary foods for infants and small children	VO [(EG) Nr. 683/2004]	100 ng/kg (ppt)
	dietary foods for special medical purposes intended specifically for infants	VO [(EG) Nr. 683/2004]	100 ng/kg (ppt)
Aflatoxin B ₁ /B ₂ /G ₁ /G ₂	different kinds of spices (e.g. chilli, paprika, pepper, nutmeg, ginger and turmeric)	VO [(EG) Nr. 2174/2003]	10 µg/kg (ppb)
	cereals	VO [(EG) Nr. 2174/2003]	4 µg/kg (ppb)
	peanuts, shell fruits, dried fruits for direct consumption or as food ingredient	VO [(EG) Nr. 2174/2003]	4 µg/kg (ppb)
	dietary foods for infants and young children	VO [(EG) Nr. 683/2004]	50 ng/kg (ppt)

Table 2: Ochratoxin A

Mycotoxin	Matrices	EU regulation	Maximum level
Ochratoxin A	cereals (including rice and buckwheat) and derived cereal products	VO [(EG) Nr. 123/2005]	5 µg/kg (ppb)
	all products derived from cereals (including processed cereal products and cereal grains intended for direct human consumption)	VO [(EG) Nr. 123/2005]	3 µg/kg (ppb)
	wine (red, white and rosé), other wine, grape must based beverages, grape juice, grape juice ingredients in other beverages, including grape nectar and concentrated grape juice as reconstituted; grape must and concentrated grape must as reconstituted, intended for direct consumption	VO [(EG) Nr. 123/2005]	2 µg/kg (ppb)
	roasted coffee	VO [(EG) Nr. 123/2005]	5 µg/kg (ppb)
	instant coffee	VO [(EG) Nr. 123/2005]	10 µg/kg (ppb)
	dried vine fruit (currants, raisins and sultanas)	VO [(EG) Nr. 123/2005]	10 µg/kg (ppb)
	baby foods and processed cereal-based foods for infants and young children	VO [(EG) Nr. 123/2005]	500 ng/kg (ppt)
	dietary foods for special medical purposes intended specifically for infants	VO [(EG) Nr. 123/2005]	500 ng/kg (ppt)

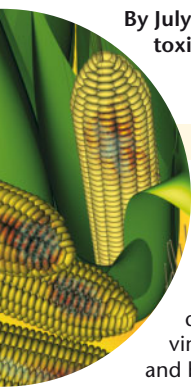
Table 3: Zearalenone

Mycotoxin	Matrices	EU regulations	Maximum level
Zearalenone	unprocessed cereals other than maize	VO [(EG) Nr. 856/2005]	100 µg/kg (ppb)
	cereal flour except maize flour	VO [(EG) Nr. 856/2005]	75 µg/kg (ppb)
	bread, pastries, biscuits	VO [(EG) Nr. 856/2005]	50 µg/kg (ppb)
	other cereal snacks and breakfast cereals	VO [(EG) Nr. 856/2005]	50 µg/kg (ppb)
	processed cereal-based foods for infants and young children and baby food	VO [(EG) Nr. 856/2005]	20 µg/kg (ppb)

Table 4: Deoxynivalenol (DON, vomitoxin)

Mycotoxin	Matrices	EU regulation	Maximum level
DON	unprocessed cereals other than durum wheat, oats and maize	VO [(EG) Nr. 856/2005]	1250 µg/kg (ppb)
	unprocessed durum wheat and oats	VO [(EG) Nr. 856/2005]	1750 µg/kg (ppb)
	cereal flour, including maize flour, maize grits and maize meal	VO [(EG) Nr. 856/2005]	750 µg/kg (ppb)
	bread, pastries, biscuits, cereal snacks and breakfast cereals	VO [(EG) Nr. 856/2005]	500 µg/kg (ppb)
	processed cereal-based foods for infants and young children and baby food	VO [(EG) Nr. 856/2005]	200 µg/kg (ppb)

By July 2007 there should be maximum levels in place for fumonisin and T-2 / HT-2 toxin based on the European levels.



New Application Notes for R-Biopharm Rhône (RBR) Products

Ochratoxin A in liquorice using OCHRAPREP® immunoaffinity columns (RBRP14/RBRP14B)

The introduction of ochratoxin A legislation for commodities such as beer, cocoa, non-vine dried fruits, liquorice, offal and blood products are currently

under discussion by the EU Commission and the following levels have so far been proposed. In light of this new information, there is a need for methods, which are suitable to meet the proposed limits.

Products	Ochratoxin A in µg/kg (ppb)
1. dried figs	8 – 10
2. dried fruit other than dried vine fruit and dried figs	1 – 2
3. beer < 6 % alcohol	0,2
4. cocoa products consumer products: cocoa powder, powdered chocolate, chocolate in powder, drinking chocolate, sweetened cocoa (powder), chocolate, milk chocolate, white chocolate	0,5 – 2
5. licorice (<i>Glycyrrhiza glabra</i>)	
5.1. liquorice root, ingredient for herbal infusion	5 – 20
5.2. liquorice extract, for use in liquorice confectionery	10 – 50
6.1. edible offal and products containing edible offal	5 – 15
6.2. blood products (such as black pudding, sausages)	2 – 5
7. liqueur wines	2 – 4

In preparation for these recommendations, a new method has been developed for analysis of ochratoxin A in liquorice using OCHRAPREP® immunoaffinity columns prior to analysis by HPLC. The method uses 1 % sodium bicarbonate / deionised water to extract the toxin and then the column is washed with 10 % tween 20 / PBS to remove pigments prior to elution. The toxin is then eluted from the column using acidified methanol and is injected onto the HPLC. The chromatograms produced using this method were found to be extremely clean considering the complexity and the colour of this sample matrix. Recoveries obtained were in excess of 75 % confirming that the method is suitable to meet the proposed legislative limits.

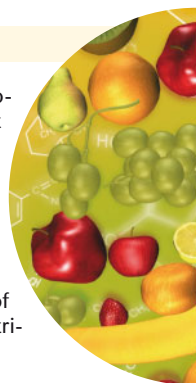
In addition to the new method for liquorice, work is currently being carried out to produce **application notes for other complex commodities** using different test kits in RBR-product range.

Method development is currently underway for the analysis of aflatoxins in cocoa using AFLACARD®, T-2 and HT-2 in oats using EASI-EXTRACT® T-2 and HT-2 and for Vitamin B₁₂ using EASI-EXTRACT® Vitamin B₁₂ columns for a variety of dairy products. So far the results with these methods look promising and the completed application notes should be available shortly.

Vitamin B₁₂: FAPAS® Proficiency Test 2143

Results of a recent FAPAS® study for the determination of various vitamins in baby food including vitamin B₁₂ are now available. The study ran from November 2006 until January 2007 and 67 out of the 84 participants provided data within the time-scale demanded by the scheme. For the first time several of the participants in the FAPAS® round used the EASI-EXTRACT® Vitamin B₁₂ columns and the VitaFast® microbial assay to analyse the samples for vitamin B₁₂ content. A total of 8 labs used

EASI-EXTRACT® Vitamin B₁₂ columns with seven out of the eight labs achieving satisfactory Z-scores. Three labs used VitaFast® as their preferred method of analysis and all three labs achieved satisfactory Z-scores for vitamin B₁₂. This shows the suitability of both test kits for analysis of vitamin B₁₂ in complex food matrices such as baby food.



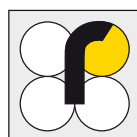
If you are interested in our products,
please contact your local distributor.

Fairs and conferences



18.03. – 21.03.2007	International Food Exhibition in London, UK Representatives: R-Biopharm Rhône, Glasgow
14.05. – 16.05.2007	29th Mycotoxin Workshop in Fellbach, Germany Representatives: R-Biopharm AG
21.05. – 23.05.2007	VIV Russia 2007 Meat safety (from animal feeds through to meat) in Moscow, Russia Representatives: R-Biopharm Distributeur (STYLAB LLC)
21.05. – 25.05.2007	XIIth International IUPAC Symposium on Mycotoxins and Phycotoxins in Istanbul, Turkey Representatives: R-Biopharm AG
03.09. – 05.09.2007	International Association for Cereal Science and Technology (ICC) Conference and Workshop in Glasgow, Scotland Representatives: R-Biopharm Rhône, Glasgow

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Announcement

13.06.2007

Congress – Vitamins in foods
in Darmstadt, Germany
organised by the ICC and R-Biopharm AG



Workshop in Austria:



Workshop „Mycotoxins“	Time	Fee in €
in Linz, AGES CC Cluster-Chemie In cooperation with the AGES (Austrian Agency for Health and Food Safety GmbH) and the ICC (International Association for Cereal Science and Technology)	25. and 26.04.2007	
day 1 (theory)	(25.04.2007) 8:45 – approx. 17:00 h	150,-
day 2 (practical part)	(26.04.2007) 9:00 – approx. 17:00 h	
participation fee for both days:		300,-

The next R-Biopharm^{news} will be published during the 2nd quarter 2007

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