

## New products

### Lupins – a versatile ingredient in foodstuffs

Due to their high protein content, lupins are widely used in the production of foodstuffs, such as ready-to-eat meals, bakery products, noodles, tofu, meats, liquid seasoning, chutneys, sauces and sandwich spreads. According to the new EU amendment regulation 2006/142/EC which took effect from the end of 2008, food producers must declare lupin and lupin products in the ingredient list. Currently, there is no limit value for this labeling requirement, i.e., products that were merely contaminated with lupins must be labeled.

For this reason, the unintentional introduction of lupins into products that do not contain lupins must be avoided. Therefore sensitive and specific detection methods are required for analytical control of the labeling regulation.

**The new RIDASCREEN®FAST Lupin (R6102) enzyme immunoassay** makes it possible to quickly and reliably test for lupins in foodstuffs in order to meet the new allergen labeling requirement.

RIDASCREEN®FAST Lupin is a sensitive sandwich enzyme immunoassay that can be used to detect quantitatively sweet lupin proteins in foodstuffs, including chocolate. The detection limit is 0.6 mg/kg of lupin protein, with test results in as little as 30 minutes.

During validation spiking tests were conducted, the results of which are shown in Table 1. Various matrices were spiked with a lupin-flour mixture of various sweet lupin species or with a degreased, purified lupin isolate with known protein content (95 % pure). The complete validation report is available from R-Biopharm.

Besides the RIDASCREEN®FAST Lupin enzyme immunoassay, R-Biopharm also offers a real-time PCR test, SureFood® Lupin (S3111). This PCR test is a suitable method for confirming a positive result from the ELISA test or as a separate, highly specific screening test.



**Table 1: Mean recovery (%) for various samples spiked with lupin**

	Spiking level mg/kg (ppm)	lupin protein expected mg/kg (ppm)	Measured mean value mg/kg (ppm)	Mean recovery (%)
Ice cream	0.01% lupin flour	39.0	40.6	104.1
Ice cream	1 ppm lupin protein	1.0	1.3	130.0
Ice cream	3 ppm lupin protein	3.0	2.5	83.3
Noodles	0.001% lupin flour	3.9	3.8	97.4
Cookies	0.01% lupin flour	39.0	38.8	99.5
Chocolate	10 ppm lupin flour	3.9	3.5	89.7

### RIDASCREEN® Sulfonamide (R3004) and RIDASCREEN® Ractopamin (R9901)

R-Biopharm has developed two new tests, which are now included in our product portfolio, RIDASCREEN® Sulfonamide (R3004) and RIDASCREEN® Ractopamin (R9901).

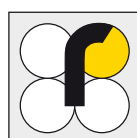
Both tests are competitive enzyme immunoassays for quantitative determination of sulfonamides or ractopamine. For the detection of sulfonamides methods are available for eggs, meat (chicken and pork), fish, shrimp, honey and milk. For the detection of ractopamine methods are available for urine, meat and liver.

Depending on the matrix, preparation time for 10 samples takes between 10 minutes and approximately 2.5 hrs. The incubation period is 1 hr and 15 min.

The detection limits for the RIDASCREEN® Sulfonamide test are: 1.5 ppb for meat (chicken) and egg, 2 ppb for meat (pork), fish, shrimp and honey and 3.5 ppb for milk. The detection limits for the RIDASCREEN® Ractopamine test are: 0.6 ppb for urine, 0.2 ppb for meat and 0.3 ppb for liver.

Additional information regarding these tests is available in the product information sheets from R-Biopharm upon request.

**Neu!**



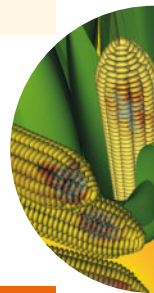
# Our products

## RIDA®QUICK Fumonisin (R5604)

The new RIDA®QUICK Fumonisin test is now available. Just like the RIDA®QUICK Aflatoxin (R5204) and the RIDA®QUICK DON (R5904), this test was developed by R-Biopharm and is a considerable improvement over the previous test. The interpretation of results is made considerably easier

by the visible test bands appearing for positive samples and not appearing for negative samples.

Several changes have been made from the previous test, which are listed in the following table.



RIDA®QUICK Fumonisin	Old	New
Art. No.	R5604	R5604
Analysis	25 (strips)	20 (strips)
Applicable sample	corn	corn
Sample preparation	homogenization and extraction	homogenization and extraction
Time required for preparing 10 samples	approx. 10 min	approx. 10 min
Test performance (incubation time)	5 min	5 min
Detection limit	2 mg/kg (ppm)  <b>positive result:</b> fumonisin content $\geq$ 2 mg/kg (ppm)  <b>negative result:</b> fumonisin content $<$ 2 mg/kg (ppm)	according to the extraction procedure: approx. 0.8 mg/kg (ppm) or approx. 4 mg/kg (ppm)  <b>positive result:</b> fumonisin content $\geq$ 0,8 mg/kg (ppm); 1 g sample + 12.5 ml extraction buffer fumonisin content $\geq$ 4 mg/kg (ppm); 1 g sample + 12.5 ml extraction buffer and 1:5 (1+4) dilution  <b>negative result:</b> fumonisin content $<$ 0,8 mg/kg (ppm); 1 g sample + 12.5 ml extraction buffer fumonisin content $<$ 4 mg/kg (ppm); sample + 12.5 ml extraction buffer and 1:5 (1+4) dilution
Interpretation of results	control band always appears  <b>test band does not appear</b> with positive samples  <b>test band appears</b> with negative samples	control band always appears  <b>test band appears</b> with positive samples  <b>test band does not appear</b> with negative samples

## VitaFast® product line

### New validation reports for the vitamins of the VitaFast® product line

We recently revised and updated our validation reports for vitamins. These newer versions contain descriptions of the bacteria used along with cross reactivity information. In addition, they cite the results of the reference materials, the spiked samples, various foodstuffs and food additives obtained with VitaFast® as well as the results from comparison studies carried out with other methods (HPLC and traditional microbiology). These validation reports are available upon request.

### FAPAS® Proficiency Test 2154 "Vitamins in breakfast cereals" (August – October 2008)

Our EASI-EXTRACT® Folic Acid immunoaffinity columns and the VitaFast® vitamin test kits for B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, niacin and folic acid were used successfully in the FAPAS® Proficiency Test 2154 "Vitamins in breakfast cereals".

Three of the laboratories (Labs 12, 48 and 54) used the microbiological VitaFast® tests to determine all water-soluble B vitamins, while Lab 23 used the EASI-EXTRACT® Folic Acid immunoaffinity column in conjunction

with HPLC to determine the folic acid content.

All laboratories listed above obtained accurate results and very good Z-scores. This demonstrates that either the EASI-EXTRACT® Folic Acid immunoaffinity columns or the VitaFast® vitamin test kits are well suited to analyzing water-soluble vitamins in breakfast cereals, in addition to many other matrices.

### Vitamins in breakfast cereals (August 2008)

Vitamin	Target concentration (Tolerance) in mg/100 g	Vitamin concentration in mg/100 g	Z-Score
Vit B1	0,85 (0,65 – 1,05)	Lab 12: 0,91	0,6
		Lab 48: 0,685	-1,7
		Lab 54: 0,85	0,0
Vit B2	1,91 (1,51 – 2,30)	Lab 12: 2,2	1,5
		Lab 48: 1,85	-0,3
		Lab 54: 1,89	-0,1
Vit B6	1,28 (1,00 – 1,56)	Lab 12: 1,19	-0,6
		Lab 48: 1,18	-0,7
		Lab 54: 1,16	-0,9
Niacin	20,7 (17,7 – 23,6)	Lab 12: 19,4	-1,0
		Lab 48: 20,62	0,0
		Lab 54: 21,6	0,6
Folat	0,182 (0,129 – 0,235)	Lab 12: 0,163	-0,7
		Lab 23: 0,188	0,2
		Lab 48: 0,185	0,1
		Lab 54: 0,173	-0,3



## Preview: Lab comparison studies 2009

FAPAS® and LVU in Herbolzheim (Germany) offer laboratory comparison studies this year as well.

### Overview of FAPAS® inter-laboratory comparison studies in the area of vitamins

FAPAS®	Start	Sample material	Parameters	Amount
2158 F	April 21, 2009	Liquid vitamin supplement	Vitamin B <sub>1</sub> , B <sub>2</sub> , B <sub>6</sub>	40 ml
2160	August 11, 2009	Breakfast cereals	Vitamin B <sub>1</sub> , B <sub>2</sub> , B <sub>6</sub> , Niacin, Folic acid	50 g
2162	November 3, 2009	Baby food	Vitamin B <sub>12</sub>	50 g

Please contact [FAPAS@eurofins.de](mailto:FAPAS@eurofins.de) for additional information.

#### LVU inter-laboratory comparison tests:

The LVU will most likely conduct a „Vitamins“ comparison study during the 3rd quarter, which will examine the vitamins B1, B2, B6, B12, folic acid, pantothenic acid and biotin. Please contact [info@lvus.de](mailto:info@lvus.de) for additional information.

## Informations from R-Biopharm Rhône, Scotland

### New and updated product informations and application notes

Our research department is continually working to improve our instructions for use (IFUs) and applications notes. As a result some modifications and improvements have been made to some of our IFUs and application notes. The following kits have been affected:

- **RBRK01 KOBRA CELL®**  
new format IFU making installation of the Cell even easier
- **RBRP80 / RBRP80B**  
**EASI-EXTRACT® Vitamin B<sub>12</sub>**  
new application notes for animal feed, cocoa powder and mushrooms
- **RBRP81 / RBRP81B**  
**EASI-EXTRACT® FOLIC ACID**  
new application note for flour

### Range of reference materials and standards

Mycotoxin reference materials and standards are ideal for validating methods, accreditation purposes, training new technicians or for use as control material during assays. R-Biopharm Rhône offers a wide range of reference materials and standards for aflatoxin, ochratoxin, zearalenone, deoxynivalenol, fumonisin or T-2 and HT-2. A new multi-mycotoxin corn reference material has recently been added to the range containing both aflatoxin (3.6 ppb) and ochratoxin (4.5 ppb). All material is supplied in re-sealable foil packs containing 50 g of sample and a Certificate of Conformance accompanies every batch of material. Each reference material is thoroughly homogenized and tested a minimum of 10 times by HPLC under strict QC conditions.

### Recent problems with aflatoxin contaminated food & feed products

The Food Standards Agency (FSA) has recently announced a recall of a batch of chili and lemon roasted pistachios following tests showing levels of aflatoxins 600 times higher than the legal limit.

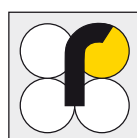
Another report by the Council of Agriculture Taipei, Taiwan confirmed that more than 300 dogs died last month from acute liver damage caused by high concentrations of cancer-causing aflatoxin in dog food supplied by Ji-Tai Forage Co. in the Central county of Yunlin. The operator of one of the two animal shelters affected said that the government should require all dog food vendors to provide proof that their products are free from aflatoxin.

About 200 of the dogs were housed in a shelter run by the Animal Protection Association of the Republic of China. The associated medical bills, inspection fees, and related expenses, has cost the association around NT \$ 5.85 million.

The Taipei Municipal Institute for Animal Health said this year that the city government has already drafted special pet food safety management and inspection rules, as well as a dedicated division that offers the public pet food examination services.

R-Biopharm Rhône provides a range of mycotoxin test kits suitable for use with a wide variety of commodities. All of the tests have been specifically designed for simple screening or laboratory use, to detect mycotoxins to European legislative limits for both food and feed. The product range includes different test formats, for instance AFLACARD® for qualitative screening or AFLAPREP® and EASI-EXTRACT® Aflatoxin immunoaffinity columns for quantitative analysis.

r-biopharm



# If you are interested in our products,

please contact your local distributor.



## Fairs and conferences

06.04. – 08.04.2009	<b>13<sup>th</sup> International Coeliac Disease Symposium 2009</b> Amsterdam, The Netherlands Representatives: R-Biopharm AG
08.06. – 10.06.2009	<b>AOAC Midwest</b> Des Moines, USA Representatives: R-Biopharm AG
15.06. – 17.06.2009	<b>31. Mycotoxin Workshop</b> Halle Münsterland Münster, Germany Representatives: R-Biopharm AG

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