

Lupins and lupin products



Lupin flour is often used in meat production on account of its emulsifying, water binding and wetting properties. Furthermore, lupin flour serves as a grain substitute for celiac disease sufferers and is used in diabetic drinks, as a coffee substitute and in the chocolate industry for lactose free products.

The lupin belongs to the legume family along with peanuts, soya, peas, beans and lentils. The increased use of lupin proteins is causing a rise in allergic reactions against lupin for many consumers. Lupin flour presents a hazard for peanut allergy sufferers, in particular, as a result of cross reactivity.

According to the new amendment regulation 2006/142/EC (amendment of EU Directive 2003/89/EC), taking effect from 23 December 2008, food producers must also declare ingredients such as lupins and lupin products in the ingredients list.

In order to comply with these new legislative demands and to make a modern method of analysis available to our customers, R-Biopharm decided to incorporate the new real-time PCR Test, **SureFood®Allergen Lupin** from our partner **Congen**, Berlin, into its product portfolio. The test has been available since the end of April under article no. S3111.

In addition, we are currently working on the development of an ELISA test system for lupin determination. We plan to launch this new product on the market at the end of the year.

About our products

RIDASCREEN® Gliadin competitive (R7011)

Celiac disease is permanent gluten intolerance against recurring toxic peptide sequences of prolamins, which leads to damage to the small bowel. The symptoms are reversible with a gluten-free diet.

During hydrolysis of gluten containing foods, with chemical or enzymatic processes, the gluten molecule is denatured into small fragments (peptides) of different sizes. These peptides in turn may also be toxic for celiac patients.

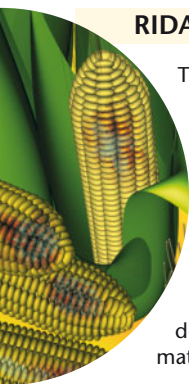
Following the product launch in 2002 of our RIDASCREEN® Gliadin test (R7001) in sandwich-ELISA format various scientific groups, in particularly Prof. Mendez' group in Spain, have continued research into the detection of gliadin in food samples. They discovered that a sandwich ELISA format has only a limited suitability for detecting gliadin in hydrolysed products.

The RIDASCREEN® Gliadin test requires at least two epitopes (antibody binding sites) to form a sandwich complex. Small peptide fragments can be produced with hydrolysis, which, due to their size, only have one epitope and it is therefore impossible for a sandwich complex to form. This means that these small fragments produced by hydrolysis are not measured.

R-Biopharm developed the RIDASCREEN® Gliadin competitive ELISA (R7011) so as to keep abreast of this development and to be in a position to offer our customers the best and most reliable method of analysis for detecting gliadin in a variety of different foodstuffs.

RIDASCREEN® Gliadin competitive is a competitive enzyme immunoassay for quantitative determination of peptide sequences of prolamins from wheat (gliadine), rye (secalin) and barley (hordein) in foodstuffs and can be used to investigate starch, syrup and beer. The specificity of the monoclonal R5 antibody is so high that it is capable of also detecting hydrolysed prolamins with a sequence of 5 – 10 amino acids. RIDASCREEN® Gliadin competitive is the first test on the market to detect gluten fragments.

As announced in R-Biopharm News III/06, the test has been officially available since April 2007.



RIDA®QUICK Aflatoxin (R5204)

This immunochromatographic assay in strip format introduced in 2006 has been validated for use with additional samples.

The RIDA®QUICK Aflatoxin test can be used for detection of aflatoxin in the following samples, assuming sample preparation is carried out as described in the product information (07-03-16).

- grains (maize, wheat, barley, rye, oats, rice, millet, canola).
- soya flour
- nuts (peanut, hazelnut, almond, Brazil nut, Macadamia nut)
- pistachios
- coconut flour
- sunflower seeds
- figs
- dates
- cashew nuts

Two further application notes are available on request for ginger and nutmeg, as well as for paprika, chilli and pepper.

RIDA®QUICK DON (R5904)

A new RIDA®QUICK DON test has been available since April 2007. Just as it was the case for RIDA®QUICK Aflatoxin (R5204), the test was developed by R-Biopharm and represents a considerable improvement over the previous test.

Interpretation of results is made considerably easier, whereby a visible test band

appears for positive samples, which is not visible for negative samples.

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

RIDA®QUICK DON	OLD	NEW
Art. No.	R5904	R5904
Determinations	25 (test strips)	20 (test strips)
Applicable samples	grains (wheat and maize)	grains (wheat, triticale and maize)
Sample Preparation	homogenize and extract	homogenize and extract
Time required for preparing 10 samples	approx. 10 min	approx. 10 min
Test performance (incubation time)	min. 10 min	5 min
Detection limit	approx. 1.25 mg/kg (ppm) positive result: DON content \geq 1.25 mg/kg (ppm) negative result: DON content < 1.25 mg/kg (ppm)	according to the extraction procedure approx. 1.25 mg/kg (ppm) or approx. 0.5 mg/kg (ppm) positive result: DON content \geq 1.25 mg/kg (ppm) (1 g sample + 40 ml extraction buffer) DON content \geq 0.5 mg/kg (ppm) (1 g sample + 15 ml extraction buffer) negative result: DON content < 1.25 mg/kg (ppm) (1 g sample + 40 ml extraction buffer) DON content < 0.5 mg/kg (ppm) (1 g sample + 15 ml extraction buffer)
Interpretation of results	control band always appears test band does not appear with positive samples test band appears with negative samples	control band always appears test band appears with positive samples test band does not appear with negative samples

EU-wide maximum mycotoxin levels

The summary of currently valid maximum mycotoxin levels as defined in the respective EU regulations included in the last issue (R-Biopharm News I/07) was unfortunately not completely up to date, we apologise for this.

You have the opportunity of obtaining the current **COMMISSION REGULATION (EC)**

No. 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs as a pdf file in German and English on request from R-Biopharm. It will be sent by E-mail.

This regulation replaces the preceding ones and summarises all maximum levels for mycotoxins.

New application notes

There are several new application notes for RIDASCREEN® Chloramphenicol (R1505) and for RIDASCREEN® Enro/Cipro (R3111) available on request:

- Chloramphenicol in serum / plasma
- Chloramphenicol in mixed feed
- Enrofloxacin and ciprofloxacin in honey in combination with RIDA®C18 column (R2002)



If you are interested in our products,

please contact your local distributor.

Product Recalls from food producers – information from R-Biopharm Rhône, Scotland

Since the beginning of March, there have been at least 7 product recalls from food producers undertaken in the UK. This is due to the failure of companies to include the presence of allergens on product labels. The allergens most commonly excluded are milk, nuts, soya and gluten with their presence making the product unsafe for consumers who are either allergic or intolerant. Although the companies involved are doing their best to ensure that all of the affected products are removed the shelves, these recalls are still an all too common occurrence particularly since the regulations were introduced back in Nov 2005.

However, it doesn't just seem to be companies' getting into trouble for missing out ingredients which are present in the product, a major retailer has recently been fined for claiming an ingredient was present when in fact no detectable levels could be found. The company claimed that their product contained more vitamin C than orange juice where in fact 2 students performing a school project found evidence to the contrary. This led to the firm being charged with misleading advertising over a 4 year period.

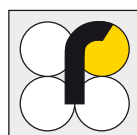
Update on applying EU Feed and Food Controls – information from R-Biopharm Rhône, Scotland

The Food Standards Agency has recently published an update on the progress on the measures being taken to apply EU Regulation 882/2004 on official controls in the UK. Regulation 882/2004 sets out general requirements for competent authorities, or enforcement authorities that are responsible for checking that businesses comply with feed and food legislation. The regulations state that food and feed should be safe with the new rules being extended to the production and marketing of the feed. A particular area of interest within the regulation is the characterisation of methods of analysis which states that methods be characterised by criteria such as reproducibility, limits of detection and recoveries amongst others. The precision values referred to should be obtained either through collaborative trials

carried out using internationally recognised protocols or where performance criteria for analytical methods have been established. Many of the R-Biopharm products meet with these requirements as the products have been involved in many trials over the years, earning them the reputation as the market leader in this sector.

There has not been an update since January of this year and this latest update provides information on on-going work at EU level to establish implementing rules for import controls for 'high-risk' feed and food products of non-animal origin (non-POAO).

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Fairs and conferences



“Vitamins in foodstuffs and food supplements“ conference 13 June 2007 in Darmstadt

The International Association for Cereal Science and Technology (ICC) in cooperation with R-Biopharm AG is organizing a Vitamin Conference in Darmstadt on Wednesday, 13 June 2007. Besides the legislative framework conditions and the nutrition physiological status quo, the focus will also be on new, improved analytical methods. The conference is aimed towards those responsible for quality assurance and the heads of laboratory in industry and in private and official laboratories.

Should you have any questions, please contact Stella Lindeke,
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International Association for Cereal Science and Technology (ICC)

Conference and Workshop in Glasgow, Scotland
03.09. – 05.09.2007

Representatives: R-Biopharm Rhône, Glasgow

Preannouncement:



“Food allergens“ workshop in Austria

November 2007

Two-day workshop consisting of a theoretical and a practical session

Venue: Vienna

Joint event: ICC (International Association for Cereal Science and Technology), AGES (Austrian Agency for Health and Food Safety), Ofi (Austrian Research Institute for Chemistry and Technology) and R-Biopharm AG

For further information on the workshops, please contact:
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The next R-Biopharm^{news} will be published during the 3rd quarter 2007

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