

RIDA News has a new name!

The name change to R-Biopharm News, reflects the fact that articles from our subsidiary R-Biopharm-Rhône (RBR) in Scotland will appear in this and in future editions. In addition to the name change, you will notice that the publication also has

a new layout. We hope that you like it and we look forward to receiving your comments.

You will also find R-Biopharm News on our homepage www.r-biopharm.com.



New products

Solid phase extraction columns for the analysis of type A and type B trichothecenes



Trichothecene analysis of animal feed, especially pig feed is on the increase as more emphasis is placed on the effects of DON, T-2 and HT-2 toxin on animal health. Trichothecene analysis primarily uses GC-MS to enable detection of several toxins simultaneously. Since August, we have introduced new solid phase extraction columns in two different column formats to aid sample preparation prior to analysis by GC-MS. These products include Trichothecene P (Art. No. RBRP51) for the preparation of cereal samples and Trichothecene EP (Art. No. RBRP53) for more complex, coloured matrices, such as animal feed. The columns are

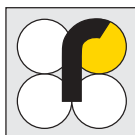
used to clean up the samples in less than 10 minutes prior to analysis by GC-MS and can be used for multiple detection of DON, nivalenol, 3-acetyl-DON, 15-acetyl-DON, diacetoxyscripenol, T-2, HT-2 and fusarenon X. The method has a detection limit of 0.1 ppm for DON and 0.2 ppm for T-2 and HT-2 toxin with high recovery rates of > 80 % for DON, nivalenol, 3-acetyl-DON, 15-acetyl-DON, diacetoxyscripenol, T-2, HT-2 and fusarenon X in cereals. The columns can also be used prior to HPLC for detection of the most common trichothecenes including DON and nivalenol.



Pectinase

The enzyme pectinase is used for protein clarification of cloudy apple juice and apple pulp samples prior to analysis of patulin by liquid chromatography.

Pectinase enzyme (Art. No. RBRP54) has been available from R-Biopharm in 50 ml units since August.



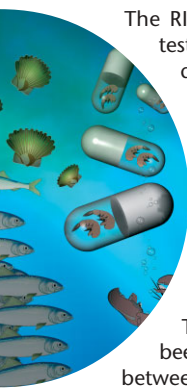
RIDASCREEN®FAST Saxitoxin

The RIDASCREEN®FAST Saxitoxin test (R1902) has recently been developed to allow faster and easier analysis of saxitoxin.

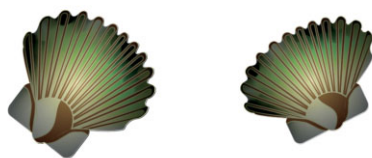
The new test principle will include a double antibody technique with improved sample preparation, changed test procedure, sensitivity (detection limit in mussels now 50 µg/kg (ppb)) and cross reactivity.

The standard range has also been changed to cover levels between 2.5 - 40 µg/kg (ppb).

The new test will replace the original RIDASCREEN® Saxitoxin test (R1901).



Please contact your local distributor for more information or visit our homepage: www.r-biopharm.com to download the leaflet.



Allergens in foodstuffs

Consumer protection through mandatory labelling of allergens and testing of foodstuffs for the existence of allergens requires reliable analytical methods. The R-Biopharm product range includes test systems to detect the most important allergens by either sandwich ELISA or PCR.

The ELISA systems for the detection of gliadin (gluten) were introduced a few months ago and have successfully been established on the market. The gliadin test principle is a monoclonal antibody that recognises the prolamin fractions in wheat, rye and barley in the same proportions. Both sandwich enzyme immunoassays, RIDASCREEN® Gliadin and RIDASCREEN®FAST Gliadin, allow for rapid quantitative analysis based on a standard curve and only require a spectrophotometer for calculation of results.



The RIDA®QUICK Gliadin test is especially user-friendly, as the result is available in a few minutes and evaluation takes place

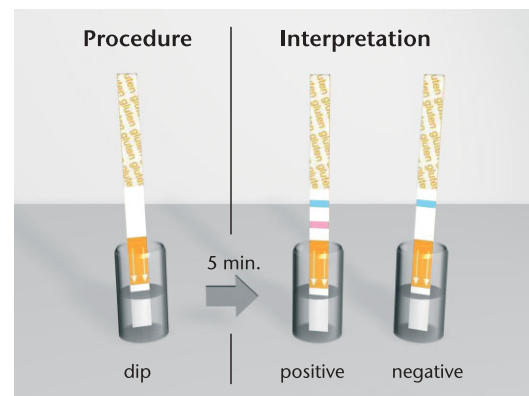


Figure 1: The test strips of the RIDA®QUICK Gliadin test are dipped into the sample solution and after 5 minutes the result can be read off from the two bands.

Sample	Spike	Result	Coefficient of variation	Recovery
Maize meal	5 ppm	4.6 ppm	0.3	92 %
Egg-free pasta	5 ppm	5.0 ppm	4.6	100 %
Yogurt waffles	5 ppm	4.7 ppm	3.6	94 %
Yogurt waffles	5 ppm	4.7 ppm	3.6	94 %
Yogurt waffles	10 ppm	9.6 ppm	1.6	96 %
Mincemeat	5 ppm	5.1 ppm	2.7	102 %
Mincemeat	10 ppm	9.6 ppm	5.5	96 %
Butter biscuits	10 ppm	11.2 ppm	0	112 %
Fresh cheese	5 ppm	4.4 ppm	27	88 %
Fresh cheese	10 ppm	9.2 ppm	0.2	92 %
Vanilla ice cream	5 ppm	5.6 ppm	1.2	112 %
Vanilla ice cream	10 ppm	11.9 ppm	4.8	119 %
Natural cake dough (3 eggs)	41025 ppm	46990.3 ppm	3.2	115 %
Pasteurized cake dough (3 eggs)	41025 ppm	51640.3 ppm	2.3	126 %
Pasta	9450 ppm	11788.4 ppm	1.5	125 %
Pasta	4725 ppm	5305.2 ppm	14.3	112 %
Pasta	2363 ppm	2250.8 ppm	1.7	95 %

Table 1: Determination of the recovery rates with the RIDASCREEN® Egg Protein test.

visually, i.e. without apparatus.

RIDA®QUICK Gliadin is an immunochromatographic test (see figure 1) with a detection limit of < 10 ppm gliadin (equivalent to < 20 ppm / 0.002% gluten). As well as rapid detection of gliadin-contaminated samples, this test can also be used as a swab test to check production hygiene.

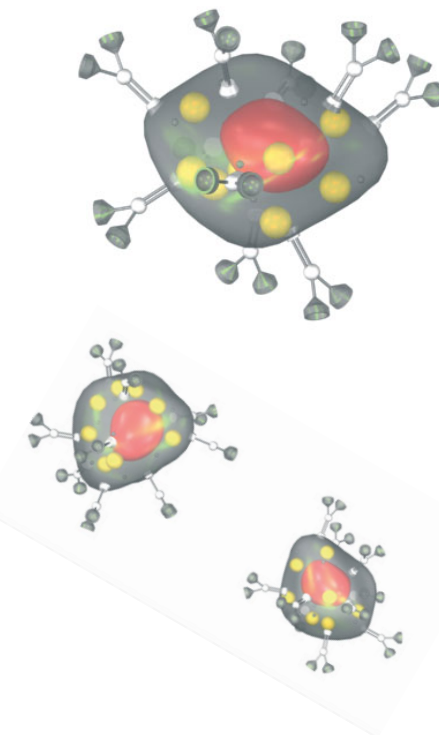
Due to the increasing frequency of nut allergies in the population we also offer RIDASCREEN® Hazelnut and Peanut tests. The newly developed RIDASCREEN®FAST Peanut test was recently certified by the AOAC Research Institute (Cert. No. 030404). The test was successfully validated in muesli, biscuits, ice cream and milk chocolate in an inter-laboratory trial with three independent laboratories.

In addition to the enzyme immunoassays for the detection of nut allergens, we offer the RIDASCREEN®FAST Almond. This test has been newly developed to detect almond and almond components in foodstuffs. This ELISA has an incubation period of just 30 min. and a detection limit of 1.7 ppm.

Our RIDASCREEN® Egg Protein test has recently been validated in an internal R-Biopharm study. This ELISA identifies egg white proteins. For validation, samples such as cereals, seeds, pasta, pastry, ice cream and chocolate were tested with and without spiking. Cross-reactions were studied with 34 different sample materials: 10 cereal samples, 4 seed samples, 11 nut samples and various other samples, such as pasta, chocolate, mincemeat, gelatine, milk powder, vanilla ice cream and soft cheese.

No significant cross-reactions could be ascertained (all < 0.0001 %). The detection limit of the RIDASCREEN® Egg Protein test is < 2 ppm and the measurement limit 2 ppm.

Table 1 shows the results of a series of different samples used to determine the recovery rates of the RIDASCREEN® Egg Protein test. The recovery rates of samples spiked with 5 - 10 ppm were between 88 - 119 % with coefficients of variation of 0 - 5.5 %.



Trouble Shooting

RIDASCREEN® Verotoxin

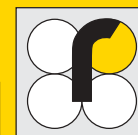
In order to obtain accurate and no false positive results with our RIDASCREEN® Verotoxin kit we have produced the following tips for successful analysis.

- we generally recommend the pre-enrichment of the germs in mTSB medium with the addition of novobiocin (10 - 20 mg/l) and cephsoludin (6 mg/l)
- mytomycin (50 ng/ml) should be added to the medium to induce verotoxin-forming germs
- after pre-enrichment, the culture should be transferred to suitable centrifuge vials and centrifuged at 3500 g at room temperature (20 - 25 °C) for 10 minutes
- we recommend covering the microtiter plate during all incubation phases to avoid evaporation; this is imperative if work is performed under a laminar flow

- since the wash buffer is supplied as a concentrate, care must be taken prior to dilution of the concentrate in order that any crystals present are dissolved in the water bath at 37 °C

- the measurement should take place within 10 minutes of the stop reagent being added

The current product information dated 01-11-28 has not been revised and does not completely consider these tips. A correction is therefore planned in the near future.



Conference and exhibition dates to the end of 2003



- 18.09. - 19.09.03:** The First National Mycotoxin Symposium, Istanbul Technical University, Faculty of Chemical and Metallurgical Engineering, Maslak, Istanbul 34469, Turkey
- 29.09. - 02.10.03:** 44. Arbeitstagung des Arbeitsgebietes LM-Hygiene der Deutsch-Veterinärmedizinischen Gesellschaft e. V., Garmisch-Partenkirchen
- 06. - 08.10.03:** VLB Meeting, Berlin
- 07. - 10.10.03:** XVIII Congreso Latinoamericano de Avicultura, Santa Cruz
- 21. - 25.10.03:** CIBUS TEC
Food Processing & Packaging Technology Exhibition, Parma
- 28. - 31.10.03:** VIV Europe, Utrecht
- 05. -07.11.03:** 1st International Symposium on Recent Advances in Food Analysis, Prague
- 09. - 13.11.03:** ISWAVLD & OIE Seminar on Biotechnology
11th International Symposium of the World Association of Veterinary Laboratory, Bangkok
- 11. - 13.11.03:** Food Allergy and Intolerance Conference, London
- 12. - 14.11.03:** Braubeviale, Nürnberg
- 19. - 22.11.03:** Medica, Düsseldorf
- 02. - 06.12.03:** Enovitis, Milano

The next R-Biopharm^{news} will be published during the IV. quarter 2003

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