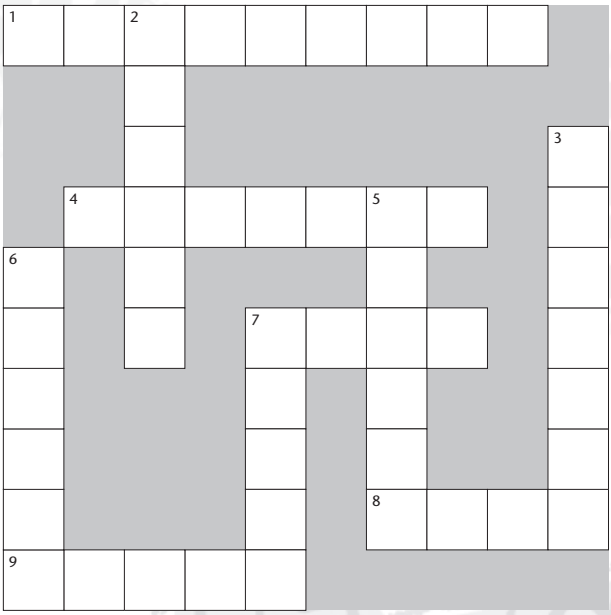
R-Biopharm news

Food and Feed Analysis IV/06

We wish you
a Merry Christmas
and a happy, successful
New Year

Christmas Crossword



Across

1 Toxic component produced by moulds or fungi (9)
4 Very famous Reindeer (7)
7 The 3 Wise Men followed this to get to their destination (4)
8 What you hang tinsel and baubles on (4)
9 The main format of the RIDASCREEN kits (5)

Down

2 Product for use with HPLC, Immunoaffinity ..... (6)
3 Preservative used in beers and wine, also an allergen (7)
5 Estimated that 1 in every 200 hundred people may be allergic to these (6)
6 Famous Christmas song ..... Bells (6)
7 The man who comes down the chimney to deliver gifts (5)

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FSA Warn Against Toxic Mussels

At the beginning of September the UK Food Standards Agency (FSA) issued a food alert following on from the Scottish Shellfish Marketing Group's withdrawal of a batch of mussels, which may contain potentially harmful levels of toxins. The recall was undertaken to remove the affected products from the shelves of major supermarkets across the UK. The toxin, Paralytic Shellfish Poisoning (PSP) occurs very infrequently but in rare cases can be fatal in humans.

Symptoms include tingling in the mouth, which spreads through the body, turning to numbness and in extreme cases can lead to paralysis, which stops the sufferer breathing. Under no circumstances should the affected mussels be eaten and they should be disposed of or returned to the store immediately.

Levels found which led to the recall were above the level permitted by law. The European Union (EU) has currently set levels of 0.8 mg/kg of tissue for PSP. R-Biopharm currently has the following ELISA test kits available for the analysis of this toxin and also for DSP:

Product	Description	No of tests	Code No.
RIDASCREEN®FAST Saxitoxin (PSP)	Enzyme immunoassay for quantitative analysis of saxitoxin and related toxins in mussels Incubation time: 30 min Detection Limit: 50 ppb	48 determinations	R1902
DSP CHECK	Enzyme immunoassay for analysis of diarrhetic shellfish toxins Incubation time: 20 mins Detection limit: 10 ppb	40 determinations	U1001

Commission Regulations for Mycotoxins

The Commission of the European Food Safety Authority (EFSA) has recently made recommendations for the analysis of various mycotoxins in feed in Europe. So far recommendations have been made for deoxynivalenol, zearalenone, ochratoxin and fumonisin in feed and complementary feedingstuffs. Although T-2 and HT-2 is thought to be important, further surveillance is required to determine their occurrence in cereals and feeds before setting levels.

Legislative levels already exist for aflatoxins, however the European Commission has also recently expanded and re-enforced border control measures to protect consumers from aflatoxin contaminated products. The new measures came into force on the 1st October 2006 and imposed special conditions on the import into the EU of certain foodstuffs from specific countries.

The R-Biopharm group has a number of different test formats designed to analyse feed for mycotoxins including ELISAs, immunoaffinity columns and lateral flow devices (dipsticks). Immunoaffinity columns are used as part of the officially recognized method for compliance of mycotoxin legislation by HPLC or GC/LCMS. However ELISAs and lateral flow devices are often more suitable for screening because of their ease of use, speed and simple interpretation of results. Several international bodies including CEN, FGIS, GIPSA and the AOAC have also recognized many of the tests.

New products

RIDA®COUNT Enterobacteriaceae (R1009) and Yeast & Mold Rapid (R1008)

RIDA®COUNT are dry medium plates for the quantitative detection of microorganisms in food samples in operational hygiene monitoring. The test cards are also suitable for analysing surfaces and membrane filter samples as well as for use as airborne microbial tests.

RIDA®COUNT test cards consist of a base film and the associated dry nutrient medium, protected by a tissue and ensures immediate absorption and spread of the sample solution. A cover film avoids involuntary contamination of the fabric.

The contact plates, which do not dry out, can also be used to sample surfaces of any type as the flexible plate allows the direct sampling of uneven surfaces (e.g. valves, door handles, water faucets etc.).

RIDA®COUNT is available for all relevant hygiene parameters:

Table 1: RIDA®COUNT – product summary

RIDA®COUNT	Shelf life (from date of manufacture)	Evaluation (after incubation)	Colony coloration
Total (bacteria count)	2 years	24 h	Red
NEW: Enterobacteriaceae	2 years	24 h	Blue
Coliform	3 years	24 h	Blue
E. Coli	2 years	24 h	Violet
E. Coli/Coliform	2 years	24 h	Violet/Blue
NEW: Yeast & Mold Rapid (yeast & mold)	1 year	48 h	Blue-green
Salmonella	1 1/2 years	24 h (after enrichment in peptone water)	Black
Staphylococcus aureus	1 1/2 years	24 h	Blue-green
Accessories	**Shelf life**	**Application**	
RIDA® 0,9% NaCl (sterile)	5 years	1 ml ampoule for activating RIDA®COUNT dry medium plates	
PromediaST-25	5 years	To analyze surfaces: Sterile swab in 10 ml PBS buffer	
CULTURA® mini incubator	Guarantee: 2 years from initial operation	For incubating RIDA®COUNT plates	

Sampling
Sampling is no longer restricted to being performed in-house. Large quantities of contact plates can be forwarded as RIDA®COUNT plates can be transported in a space saving way and without condensation problems. Dry contacting can therefore be performed on-site. While they are still inactive, the plates are sent to the laboratory and are only then activated with 1 ml NaCl (within 24 h of sampling). The addition of the 1ml NaCl also means that RIDA®COUNT is prepared for traditional wet contacting which can be performed after approx. 10 min.
The swab is recommended for sampling in very inaccessible places. Swab samples can be streaked directly on RIDA®COUNT or alternatively, the swab is shaken in PBS and 1 ml of solution is plated on RIDA®COUNT.

RIDA®COUNT Yeast & Mold Rapid (R1008)
Until now, it was only possible to determine yeast & mold with a considerable investment in time (3 – 7 days). With RIDA®COUNT Yeast & Mold Rapid detection takes just 48 h. The colonies remain very small and do not overlap. Counting is very much simplified as a result. For differentiating, the colonies are picked up and evaluated under the microscope.

RIDA®COUNT Enterobacteriaceae (R1009)
The detection of Entero bacteria is of increasing importance in the slaughter and meat handling industry. The RIDA®COUNT test card can be used both for contact samples from carcasses, from meat treatment machines (knives, cutting blades), as well as for homogenized meat samples.

Summary
Shelf lives up to 3 years, the absence of condensation, as well as flexible application options, make RIDA®COUNT a real alternative to conventional agar plates. The small packaging units also allow smaller companies to economically deploy RIDA®COUNT.

About our products

VitaFast® – microbiological vitamin analytics

The gold standard in vitamin analysis was and still is the microbiological method, as it allows the determination of both native and added vitamins. A further advantage is that vitamin B_{12}, folic acid and biotin are also measured at low concentrations, which otherwise presents problems for HPLC analytics.

The VitaFast® tests are based on the traditional microbiological method. The advancement of the VitaFast® product line has resulted in all of the test components being available in standardized and ready-to-use forms. For example, the microtiter plate wells are already coated with specific microorganisms, and the medium and standard only have to be reconstituted with water and then be pipetted into the wells. Compared with traditional microbiological methods, there is no costly cultivation and storage of bacteria in a strain collection, or the time-consuming verification of the purity of the medium and the precise standard concentration.

The quality controlled VitaFast® test systems are a reliable measuring technique with low variation coefficients (< 10 %), which largely eliminate the need for repetition of tests.

Recently, the manufacturer of the VitaFast® products, the "Institut for product quality" (ifp)" successfully participated in the FAPAS® study 2141 "Vitamins in breakfast cereals". Here it should be pointed out that the "true" concentrations were not known, but rather a statistical "target value" was determined. The labs used various analysis and sample preparation methods. The ifp

extracted the sample with enzymes, so as to measure the added as well as the natural folates. This led to a higher value measured than e.g. for labs that only undertook extraction with a phosphate buffer (only added folic acid is measured in this case).

Table 2: „FAPAS® study 2141 "Vitamins in breakfast cereals" (Sept. 2006)

Vitamin	Target value mg / 100 g	Tolerance range mg / 100 g	VitaFast® mg / 100 g
Vit. B_2	2.07	+/– 0.42	2.07
Vit. B_6	2.07	+/– 0.42	2.01
Niacin	21.3	+/– 3.1	21.6
Folat	0.458	+/– 0.116	0.512

The user-friendly VitaFast® product line has led to an increasing number of labs returning to performing their vitamin analytics themselves, because, compared with "traditional microbiology", VitaFast® is cheaper and faster. The test procedure only requires sterile single use materials and a microtiter plate photometer.

Additional advantages of VitaFast®:
- The test kit contains three sets of reagents, so that three independent test set-ups for 96 determinations are possible and the test can be applied flexibly.
- Sample preparation is optimized and validated for various matrices.
- The results are available after an incubation time of 24 or 48 h depending on the parameter.
- The RIDA®SOFT Win software simplifies evaluation, as the standard concentrations are already stored in the software.

New Applications

There are several new applications for RIDASCREEN® Ochratoxin A 30/15 (R1311) available on request:

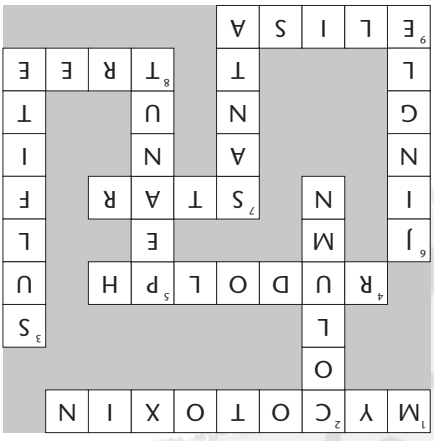
Ochratoxin A in wine:
- combined with the RIDA® Ochratoxin A columns (R1303)

Ochratoxin A in raw and roasted coffee:
- combined with the RIDA® Ochratoxin A columns (R1303)

Ochratoxin A in dried fruits:
- combined with the RIDA® Ochratoxin A columns (R1303)

If you are interested

in our products, please contact your local distributor.



The next R-Biopharm[news] will be published during the I[st] quarter 2007

R-Biopharm[news] is edited by

R-Biopharm AG
Landwehrstraße 54, 64293 Darmstadt
Germany
Telefon: +49 61 51 - 81 02-0
Telefax: +49 61 51 - 81 02-40

r-biopharm

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