

BSE / Risk Material

The continuing BSE crisis together with reports of wrongly labelled sausages and the detection of risk material in a wide range of sausages including liver sausage has led consumers to mistrust the content of their foods. While the use in food production of risk material from ruminants has been banned since October 1st 2000, Food Safety authorities have to prove that meat products are free from such risk material as brain, spinal cord (CNS).

Lücker and his colleagues (LÜCKER et al., 2000) tested a range of sausages (n = 622) from throughout Germany and demonstrated that 4.3 % of raw sausages, 2.0 % of boiled sausages, 9.7 % of liver sausage and 20.8 % of boiled minced sausages were positive for CNS risk material.

The magazine "ÖKO-TEST" examined 100 types of sausages and found that 15 % contained tissues from central nervous system.

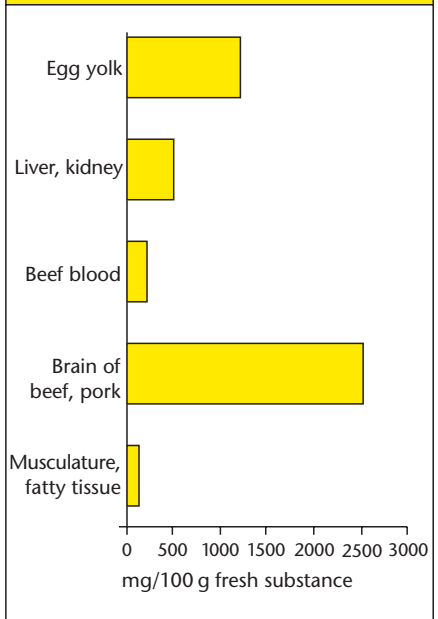
We are pleased to inform you of three testing systems which will be aid in detecting possible BSE risk material. These are the new **RIDASCREEN® Risk Material** assay, the cholesterol enzyme test and the newly developed PCR-ELISA (SureFood) which are capable of detecting and distinguishing between animal species in food and feed samples.

R-Biopharm GmbH has developed a risk material assay for the detection of brain and spinal cord (CNS) in raw and processed meat and meat products. The assay will be available under the trade name **RIDASCREEN®** in March 2001. It will be the first rapid assay in ELISA format (assay performance approx. 1h) which allows a high performance of several samples in parallel. The detection limit is $\leq 0.2\%$ for brain material and 0.01% for spinal cord. All reagents for this 96 microtiter plate ELISA are included in the test. The measurement is done with a microtiter plate photometer at 450 nm. The assay

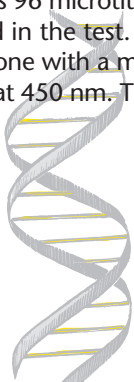
doesn't determine the original species of the risk material. This is an advantage as any risk material independent from which species won't be accepted from the customers.

Assay control samples are available.

Cholesterol content of different tissues (SOUCI et al., 2000)



With the enzymatic **BOEHRINGER MANNHEIM Cholesterin test** cholesterol can be used as an indicator for the processing of risk material (brain, spinal marrow) as part of a rapid, low-cost screening method, since the various forms of tissue have very different cholesterol contents. Consequently a cholesterol content higher than a certain value (depending on the type of sausage) supports the suspicion that CNS tissue has been processed or meat has been contaminated. The advantages of this test system are the short test duration of two hours, easy handling and the low costs of 5.00 - 6.00 DM per test. The objective of this screening process is to identify suspicious samples, quickly and cost-effectively, and subsequently to verify





these using a reference process. The confirmation of these results can be performed with the new RIDASCREEN® Risk Material assay.

Determination of animal species using the newly developed **PCR-ELISA** from our co-operation partner, CONGEN. The company serves on the one hand to identify the meat of different sausages (wrongfully labelled sausage) and on the other hand, animal feed can be analysed for animal components of different species which it may contain. This is a three-step test system, consisting of isolation and purification of the genomic sample-DNA, followed by PCR-amplification of the DNA and identification of the amplified DNA by means of sequence-specific hybridisation probes and detection. Species which are capable of identification include cows, pigs, sheep, goats, various poultry species and game. Simultaneous analysis of different species is possible in one test run.

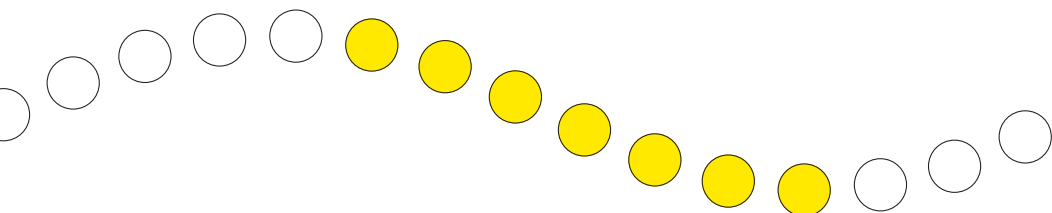
At the same time we are offering a new service in this field, in collaboration with CONGEN, a company based in Berlin. This service is interesting for all customers who do not possess a PCR-unit, or who are in the process of establishing analytical testing but would wish to have analytical results from this sensitive method.




Citrinin – new research results cast doubts on the use of red mould rice

In the food letter of the 11/12 edition a report was published on red mould rice, which is used traditionally in East Asia for colouring food. According to press information by the (German) Federal Institute for Meat Research (BAFF) red mould rice forms attractive red, orange and yellow colourings on rice or other substrates with a high starch content, through moulds of the monascus genus. Its use for colouring food is therefore also under discussion in Germany. Since preservative properties are also attributed to red mould rice, this also represents a possible alternative to the use of nitrite in salt meat. From the legal point of view red mould rice is a non-approved food additive. It has, however, already been detected in vegetarian soya sausage by the Institute of Microbiology and Toxicology of the BAFF.

Use of red mould rice is problematic, since the monascus moulds can not only form attractive colours, but also the mycotoxin citrinin. Citrinin is very similar to ochratoxin A in its toxic effects, these being mainly nephrotoxic effects caused by citrinin. In tests with red mould rice prepared in the laboratory citrinin concentrations of 600 to 800 mg/kg dry mass were determined. However, the BAFF also pointed out that citrinin has been used for the effective treatment of liver metastases, and therefore also has positive effects. In this connection we wish to refer you to our RIDASCREEN® citrinin test, with which it is possible to quantitatively determine citrinin in cereals and animal food, with a detection limit of 15 µg/kg (ppb).





Action values for DON in cereal products

The idea of action limits put forward by the European Millers' Association has been welcomed in a not yet officially published document of the EU-Commission. In this the EU-Commission recommends that member states should adopt measures to reduce the presence of fusarium toxins in cereals and cereal products. This calls for increased monitoring of the presence of DON in cereals and cereal products. So-called action values (values requiring measures to be taken, not limit values) of 0.5 ppm DON for cereal products ready for consumption, and 0.75 ppm DON for flour which is to be further processed in food have been recommended.



About our products

RIDA® Clenbuterol columns (R 1703)

In the course of the last few years we have been able to provide sample preparations, which had previously only been possible with RIDA® Clenbuterol columns, without the use of immuno-affinity columns. Therefore, as from today we are no longer supplying RIDA® Clenbuterol columns. An example of this is the supply of feed samples. The supplementary sample preparation of feed samples for use in the RIDASCREEN® Clenbuterol assay can be obtained from your distributor.

Positive and negative assay controls

As from today we are offering you positive and negative assay controls for the RIDASCREEN® Clenbuterol, Trenbolon and DES assays, in the form of lyophilisates from positive or negative calf's urine. These urine-lyophilisates are grown materials.

The lyophilisates, reconstituted, in aliquots, are prepared according to the respective specification and used in the particular test. The results to be expected are given in the product leaflets. The Art. No. for these assay controls are as follows:

- R 1707 Clenbuterol assay control (positive)
- R 1708 Clenbuterol assay control (negative)
- R 2607 Trenbolon assay control (positive)
- R 2608 Trenbolon assay control (negative)
- R 2707 DES assay control (positive)
- R 2708 DES test control (negative)

These assay controls can be ordered at your local distributor, quoting the above mentioned article number. For more information, please contact your local distributor.

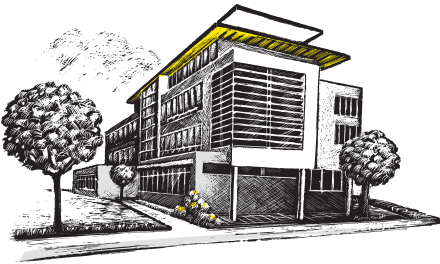
About ourselves

New members of the staff

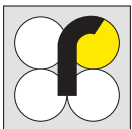
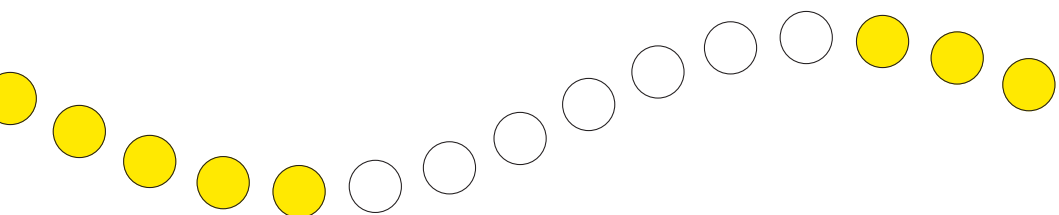
Mrs U. Ukelis, for many years a member of the R-Biopharm staff and known personally to many of you, left our company on 31.12.00. In the past she looked after the work in our applications laboratory, carried out the practical part of workshops and was responsible for technical service for our customers and distributors. Her position has been taken over by our new employee, Mrs Maria da Costa. However, a change has been made with regard to the field of responsibility. Mrs da Costa is responsible only for technical support of our distributors and international customers.

National Marketing

As from 1.12.2000 we have a new colleague in the national marketing department. Dr. Walter Lübbe, doctor of veterinary medicine, is supporting our marketing team in the introduction of the cholesterol test from BOEHRINGER-MANNHEIM enzymatic food and bioanalysis product line for the detection of beef material in meat and sausage (see leading article). In future Dr. Lübbe will look after new products for the determination of animal species in food and animal feed, as well as BSE-analysis, and will be your contact in these matters. Telefon: (0 61 51) 81 02-58 or e-mail to w.luebbe@r-biopharm.de.



Designed by Plankton, Darmstadt



Die nächste RIDA News erscheint im II. Quartal 2001
RIDA News edited by
R-Biopharm GmbH, Dolivostraße 10, 64293 Darmstadt,
Telefon: (0 61 51) 81 02 - 24 (-25), Telefax: (0 61 51) 81 02 - 40