R-Biopharm news

Food and Feed Analysis I/05

RIDASCREEN® Haptoglobin

The plasma protein haptoglobin is an inflammation marker. These substances, also known as acute phase proteins (APPs), are increasingly synthesized in the liver in the course of the acute phase reaction (APR) and are secreted into the bloodstream.

APR is a physiological response of the body to infection, injury, tissue-lesions, inflammations or neoplasia. Its function is to prevent further tissue damage and to isolate and destroy pathogens such that normal tissue function can be restored.

The function of haptoglobin is to bind haemoglobin released with erythrocyte decay. This high molecular weight complex cannot be eliminated through the kidneys thus preventing a loss of iron. At the same time, this complex also serves as a protective mechanism against the nephrotoxicity of free haemoglobin.

Since haptoglobin is an unspecific and very sensitive indicator for all health impairment resulting from inflammatory processes, the measurement of haptoglobin is useful, especially in pigs, e.g. in rearing and fattening.

The increase of haptoglobin prior to the appearance of clinical symptoms or in the course of sub-clinical diseases makes it a valuable parameter in prevention programs.

Possible causes for a rise in haptoglobin plasma levels can be bacterial and viral infections, as well as local inflammations. It is further observed in pigs, whose immune system is under constant stress due to inadequately hygienic conditions, that plasma levels rise continuously.

The haptoglobin concentration in fattening pigs is independent of gender, breed and age (> 3 weeks old).

The consequences and effects of increased haptoglobin levels can be extremely serious. It has been shown that losses in meat production are to be expected in groups of animals with a significantly raised haptoglobin plasma concentration.

Piglets with elevated haptoglobin concentrations at the time of entering the pen have a higher risk of generating medication costs in their subsequent rearing. Fattening pigs with elevated haptoglobin values

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at the end of rearing have a higher risk of disease during the initial fattening phase.

Haptoglobin is an ideal screening parameter in the early identification of performance reducing factors in preventative health management for the pig production chain – from breeding to slaughter.

The RIDASCREEN® Haptoglobin test is a competitive ELISA in 96 well format. Pig serum or meat juice samples can be used. The detection limit of the test is 0.033 mg/ml

This parameter can also be applied in milk production for early identification of mastitis, as haptoglobin can also be formed directly in the udder.

The suitability of haptoglobin measurement in milk in the early identification of mastitis has been confirmed in practice. Not only can clinically diseased udder quarters be identified on the basis of elevated haptoglobin values, but also subclinically diseased udder quarters (on the lines of the German Veterinary Medical Society (DVG) definition, 2002).

This test is currently undergoing development in-house towards market maturity.

Mycotoxin Legislation Update

The UK Food Standards Agency has provided a recent update on discussions on EU mycotoxin legislation following their meeting with Trade Associations in December. It was proposed that legislative limits for deoxynivalenol will come into force on the 1st July 2006 and will include a higher limit of 1250 *µg*/kg for deoxynivalenol in unprocessed cereals, 1750 *µg*/kg for unprocessed durum wheat and oats, 250 *µg*/kg for baby foods. Limits for cereal flour of 750 *µg*/kg and cereal products of 500 *µg*/kg will remain as previously proposed and a limit for unprocessed maize will be delayed.

EU legislative limits for zearalenone in maize and maize based products and those for fumonisins will be subject to further discussions and are not expected to apply until July 2007.

The EU Standing Committee has already voted in favour of a European proposal to amend regulation 466/2001 to establish limits of 5.0 *µg*/kg for roasted coffee beans and ground roasted coffee; 10.0 *µg*/kg for soluble coffee; 2.0 *µg*/kg for wine and/or grape must based drinks, grape juice and grape juice ingredients used in other drinks. The Regulation has been submitted for formal adoption by the Commission and is expected to come into force in the first half of 2005. A new directive on sampling and analysis of coffee, wine and grape juice samples for OTA analysis has also been proposed by the European Commission.

RBR supply a wide range of immunoaffinity columns, cards and ELISAs to meet with current and forthcoming mycotoxin legislation. Further information on the most suitable products for your laboratory or copies of the above documents are available from R-Biopharm Rhône Ltd on request.

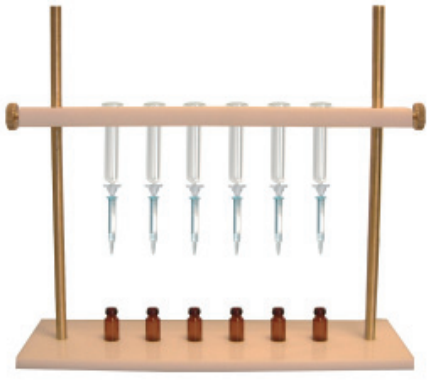
About our products

Aflatoxins in hazelnut paste using R-Biopharm Rhône Immunoaffinity columns

A European collaborative study to validate an HPLC method for aflatoxins in hazelnut paste using the R-Biopharm Rhône immunoaffinity columns has been completed and accepted for publication in the March/April 2005 issue of the AOAC Journal. The new collaboratively tested method using RBR columns produced exceptionally good recoveries, repeatability and reproducibility with hazelnut paste and as a result has been submitted to CEN TC275 WG5 for consideration as a CEN Standard method.

Economically, hazelnut paste is an important export commodity for Turkey to the EU and is widely used in a range of food products such as a filler for confectionary. As import controls on aflatoxins are strictly enforced, it is critical that an official method is adopted specifically for hazelnut paste to allow analysts and official bodies to effectively control aflatoxins in this commodity.

Immunoaffinity Column Rack



R-Biopharm Rhône have designed a simple and easy to use racking system (Art. No.: RBRCR1) for performing mycotoxin analysis using immunoaffinity columns. The robust, chemical resistant, variable position rack, provides analysts with a solid foundation to easily perform multiple column analysis. Holding up to six immunoaffinity column at a time, the rack offers increased sample productivity within a tidy and organised environment.

RIDASCREEN®FAST Folsäure (folic acid) and FAST Vitamin B_{12}

The RIDASCREEN®FAST Folsäure (folic acid) test (Art. No. R3202) uses another specific antibody against folic acid in the current batch 02494, shelf life until 2006-04. This results in a change in the standard range from 0 - 81 ppb to 0 - 25 ppb. The detection limit is unaffected, as the 2nd standard is still 1 ppb. Cross reactions however have changed with the use of a new antibody. They are now 100 % for folic acid (unchanged), 3 % for dihydrofolic acid (previously 25.5%), 1.5 % for tertrahydrofolic acid (previously 15.2 %) and 0.1% for 5-methyltetrahydrofolic acid (previously 5 %). The cross reaction with 5-formyltetrahydrofolic acid is 0% for both the old and new antibody.

The new production run (in the second quarter 2005) of the RIDASCREEN®FAST Vitamin B_{12} (Art. No. R2102) test will shortly also use a new specific antibody and will lead to similar changes. The measuring range changes from 0 - 40.5 ppb previously to 0 - 30 ppb without any change in the detection limit. The cross reaction with vitamin B_{12a} (hydroxycobalamin) is no longer 35 %, but is now around 80 %.

RIDA®SOFT Win

We would like to inform all customers using the RIDA®SOFT Win software program for evaluating RIDASCREEN® ELISA that version 1.44 is now available and a new version, i.e. 1.45, will soon follow with an additional correction for FAST Vitamin B_{12}. We would like to request all customers to contact us for their free updates. As corrections are always necessary, you should take advantage of obtaining free updates from us in your own interest. The requirement for receiving this free update is simply to state the serial number of the software.

If you are interested

in our products, don't hesitate to contact your local distributor.

Introducing the R-Biopharm Rhône UK Sales Team

RBR would like to take this opportunity to introduce our customers to its UK Sales Team. RBR has split the UK into three territories, the Northern Territory, the Southern Territory and Scotland. Dr Stephanie Smith is responsible for sales and product support in the Northern Territory and has been with RBR for three years. The newest member of the team is Victoria Jordan. Victoria joined the Marketing Team in August 2004 as Product Specialist and is also responsible for sales activities in Scotland in 2005. Dr Andrew Kitt, the UK Sales Manager covers the Southern Territory in the UK and is also responsible for Ireland. Andrew has been with RBR for seven years.

RBR is proud of the service it offers to our customers. The Sales Team are highly experienced in the field of food diagnostics and have significant technical knowledge of ELISAs, immunoaffinity columns, cards and lateral flow devices for a wide range of test applications. The team are happy to arrange visits, demonstrations and to offer technical advice where necessary. To contact a member of the Sales Team either send an e-mail to:

info@r-biopharmrhone.com

and this will be forwarded to the relevant person or call 0141 9452924.

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Fairs and conferences in the first half of 2005

26.01. - 28.01.2005:	**2005 International Poultry Exposition** in Atlanta, Georgia, USA Representative: Gesa Krause, R-Biopharm AG
31. 01. - 3. 02.2005:	**ARAB LAB** in Dubai, Hall 3, Stand 509 Representative: Pablo Altmann, R-Biopharm AG
08.02. - 11.02.2005:	**Cereals Mixed Feed** in Moscow, Russia Representative: Stylab, Moscow
23.02. - 25.02.2005	**Agri Hort** in Kiew, Ukraine Representative: Ltd 3i, Lviv
07.03. - 09.03.2005:	**Food Allerg. Meth. Workshop** In Vancouver, BC, Canada Representative: R-Biopharm Inc.
15.03.2005:	**Mycotoxin in Hazelnut Workshop** in Trabzon, Turkey Representative: R-Biopharm Rhône
16.03. - 18.03.2005 :	**VIV Asia** in Bankok, Thailand Representative: Pablo Altmann, R-Biopharm AG
16.03. - 18.03.2005:	**Food Safety Summit** in Washington, D.C., U.S.A Representative: R-Biopharm Inc.
31.03. - 03.04.2005:	**Foteg** in Istanbul, Turkey Representative: Pablo Altmann, R-Biopharm AG und PERA MEDIKAL, Istanbul
19.04. - 22.04.2005:	**Analytica Russia** in Moscow, Russia Representative: Stylab, Moskau
22.05. - 23.05.2005:	**2nd Turkish National Mycotoxin Meeting** in Istanbul, Turkey Representative: R-Biopharm AG
23.05. - 25.05.2005:	**Rapid Methods** in Bilthoven, Netherlands Representative: R-Biopharm AG
09.06. - 10.06.2005:	**International Microbiology Conference** in Campden, UK Representative: R-Biopharm Rhône

The next R-Biopharm^{news} will be published during the II. quarter 2005

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