

Salmonella Analysis



Foodstuffs and their raw ingredients, such as poultry, eggs and egg products, and pork are considered to be an excellent culture medium for germs and pathogens. Since the most common foodborne illness is caused by Salmonella, particular attention is given to the detection and identification of this pathogen.

The requirements of salmonella analysis differ widely depending on the properties of the sample and the facilities available at the test laboratory.

R-Biopharm offers individual test systems to suit the different needs of the analyst (Tables 1 and 2).

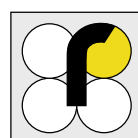
In addition to the wide range of products for salmonella analysis, the various test formats are also available for other parameters, such as LOCATE[®] Listeria, or Sure Food[®] Campylobacter and Listeria. RIDA[®]COUNT is also available for the hygiene parameters including total plate counts, coliform counts, E. coli, yeasts & moulds and Staph. aureus. We are happy to advise you on the most appropriate test system to suit your own working procedures.

Tab. 1: R-Biopharm test systems for salmonella analysis

Test system	Method	Pre-enrichment	Presentation of results	Results available in
RIDA [®] COUNT Salmonella	Dry culture medium	25 g/225 ml buffered peptone water, 18 ± 1 h at 37 ± 1°C	colony-forming units (cfu)	48 h
LOCATE [®] Salmonella	ELISA	25 g/225 ml buffered peptone water, 18 ± 1 h at 37 ± 1°C; 0.1 ml in 10 ml Rappaport-Vassiliadis (RVS), 18-24 h at 41.5 ± 0.5°C	photometric (OD)	48 h
SPECTATE [®] Salmonella	Latex agglutination (confirmation test)	The test can be conducted on presumptive positive samples retained from the LOCATE [®] test or on colonies.	visual confirmation of serovars A-G due to the production of different colours of agglutination	4 min
SureFood [®] Pathogen Salmonella	PCR-ELISA and real-time PCR (fluorescence labelled probes)	ISO, DIN, §35 LMBG	PCR-ELISA: photometric (OD) real-time PCR: online detection of the target sequence (amplicon) by increasing fluorescence	24 h

Tab. 2: Special features and benefits of R-Biopharm test systems for the user

Test system	Test features	Benefits
RIDA [®] COUNT Salmonella	<ul style="list-style-type: none"> flexible medium sheets shelf life: 15 months test can be conducted with the usual microbiological lab equipment 	<ul style="list-style-type: none"> less space required for incubation and waste disposal supplies can be stored without condensation or product loss no additional investment required to conduct the test
LOCATE [®] Salmonella	<ul style="list-style-type: none"> AOAC, AFNOR and EMMAS approved automated yes/no results within 48 hours 	<ul style="list-style-type: none"> use of a method which has been validated by independent external laboratories enables high sample throughput rates simple interpretation and fast product release
SPECTATE [®] Salmonella	<ul style="list-style-type: none"> rapid confirmation test 	<ul style="list-style-type: none"> endorsement of ELISA results and suspect colonies
SureFood [®] Pathogen Salmonella	<ul style="list-style-type: none"> high sensitivity and specificity 24 h from sampling until availability of results 	<ul style="list-style-type: none"> maximum confidence when analysing problematic samples or samples with a low level of contamination fastest possible product release



New Products

RIDASCREEN® Enro/Cipro (R3111)



Enrofloxacin (metabolite: ciprofloxacin) and danofloxacin are antibiotics, which are permitted for use in food-producing animals. These compounds, which belong to the group of fluoroquinolones, are gyrase inhibitors which prevent the transcription of bacterial DNA. Fluoroquinolones are highly effective against a number of bacterial pathogens and are frequently used on cattle, pigs and chickens in veterinary medicine. The use of fluoroquinolones has become more widespread in recent years, to prevent infectious diseases,

particularly in poultry, pig, fish and shrimp farming. This excessive use has resulted in animals becoming resistant to these antibiotics. The European Union has consequently introduced MRLs (Maximum Residue Limits) for some of the substances in this group in the amendment to Directive (EEC) No 2377/90.

R-Biopharm has extended its product range of competitive enzyme immunoassays for the quantitative detection of antibiotics to include RIDASCREEN® Enro/Cipro-Test (R3111). This test can be used to detect enrofloxacin and ciprofloxacin in milk, beef, pork, mutton, chicken, turkey, fish and shrimps according to European regulations.

Specifications of the RIDASCREEN® Enro/Cipro enzyme immunoassay:

Format	microtiter plate with 96 wells (12 x 8 well removable strips)	
Sample preparation	milk: use directly in the test meat, fish, shrimp: require homogenisation, extraction, centrifugation, dilution	
Time requirement: Sample preparation (for 10 samples)	Meat, fish, shrimp: approx. 1.5 h	
Test implementation (incubation time)	1 h 15 min	
Limit of detection	Milk: 1 ppb Meat, fish, shrimp: 10 ppb	
Recovery rate	Spiked milk: spiked beef: spiked pork: spiked mutton: spiked chicken: spiked turkey: spiked fish: spiked shrimp:	approx. 95 - 105 % approx. 95 - 115 % approx. 80 - 100 % approx. 80 - 95 % approx. 75 - 85 % approx. 75 - 100 % approx. 80 % approx. 80 - 90 %
Specificity: The specificity of the RIDASCREEN® Enro/Cipro test was determined by analysing the cross-reactivities to corresponding substances.	Enrofloxacin: Ciprofloxacin: Danofloxacin: Norfloxacin: Flumequin: Marbofloxacin: Oxolinic acid:	approx. 100 % approx. 100 % 80 - 85 % 12 - 15 % approx. 5 % approx. 5 % approx. 5 %

RIDASCREEN®FAST Hazelnut (R6802)

R-Biopharm AG successfully took part in the inter-laboratory study "Detection of hazelnut residue in dark chocolate" conducted by the German Consumer Safety and Food Safety Office. A total of 15 laboratories tested fine dark chocolate using the RIDASCREEN®FAST Hazelnut test. As its next project, the working group headed by Dr. Wolfgang Weber will develop a method, which complies with the

requirements of Section 35 LMBG (German law on foodstuffs and consumer goods).

RIDASCREEN®FAST Hazelnut (R6802) has improved sensitivity compared with RIDASCREEN® Hazelnut (R6801) and it is also faster and easier to use. RIDASCREEN® Hazelnut (R6801) will be discontinued and will be replaced by RIDASCREEN®FAST Hazelnut (R6802).

Specifications of the RIDASCREEN®FAST Hazelnut enzyme immunoassay:

Format	microtiter plate with 48 wells (6 x 8 well removable strips)
Sample preparation	homogenisation, extraction and centrifugation
Time requirement: Sample preparation (for 10 samples)	approx. 20 min
Test implementation (incubation time)	30 min
Limit of detection	1.5 mg/kg (ppm)
Limit of quantification	2.5 mg/kg (ppm)
Specificity	Other nuts do not show any cross reaction

RIDA®COUNT Coliform (R1002) und E. coli (R1006)

The incubation times of 24 - 48 h previously stated in the individual product information sheets have been reduced to 24 h.

RIDA®COUNT Coliform was found to enable bacteria with previous cell damage to grow and to form colonies on RIDA®COUNT Coliform within a shorter 24 h incubation period. Compared to other methods this

means that RIDA®COUNT Coliform offers a significant improvement in sensitivity.



RBR Mycotoxin Standards in New 3 ml format

Following customer requests, RBR is pleased to introduce the mycotoxin standards in a new 3 ml format.

It is thought that the 3 ml format will be of particular use to smaller laboratories that still need to use a ready to use standard but in reduced quantities with less waste. The first 3 ml standards to be introduced into our product range include aflatoxin standard (RBRP22A), ochratoxin standard (RBRP11A) and zearalenone standard (RBRP44A). All 3 standards are available at a concentration of 1000 ng/ml. Additional mycotoxin standards in a 3 ml

format are expected to follow later in the year.

The RBR mycotoxin standards remove the need to handle hazardous mycotoxin powders and can be used for spiking or to assist accurate analysis by HPLC.

All standards are QC controlled and a certificate of conformance accompanies each batch. Standards can be purchased on a call off basis to ensure maximum shelf life or as a package with immunoaffinity columns.

RBR New Ochratoxin Clean up Column

Recent legislation for ochratoxin A in coffee has been introduced at levels of 5 ppb in roast and ground coffee and 10 ppb in soluble coffee. RBR have developed a new solid phase clean-up column (RBRP13) for use in conjunction with OCHRACARD® (RBRP48) for analysis of roast, ground and soluble coffee. The new column removes pigments in the coffee, which may otherwise interfere with the interpretation of the test results obtained by OCHRACARD®.

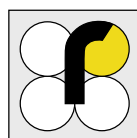
The test is flexible and the user can adapt the method in order to screen at different detection levels in accordance with the regulations. New methods are also in development using the ochratoxin clean-up columns for analysis of ochratoxin A in certain spices using OCHRACARD®.

Ochratoxin clean-up columns are available in packs of 50, please quote product code RBRP13 when placing an order.

If you are interested

in our products, please contact your local distributor for more information.

r-biopharm



2005 Trade Fairs and Conferences

R-Biopharm will be present at the following Trade Fairs and Conferences:	
11 th – 14 th Sept. 05	2005 AACC Annual Meeting In Orlando, Florida, USA Representative: R-Biopharm AG
11 th – 15 th Sept. 05	119th AOAC Annual Meeting In Orlando, Florida, USA Representative: R-Biopharm AG
13 th – 16 th Sept. 05	SPACE 2005 Salon Professionnel des Productions Animales In Rennes, France Hall 4 - Stand A7 www.space.fr Representative: R-Biopharm France
15 th – 18 th Sept. 05	AOECS (Coeliac) Conference Edinburgh, UK Representative: R-Biopharm Rhône Ltd.
31 st Oct. – 2 nd Nov. 05	BCPC (Cereal) Congress and Exhibition Glasgow, UK Representative: R-Biopharm Rhône Ltd.
2 nd – 4 th Nov. 05	Recent Advances in Food Analysis Prague, Czech Republic Representative: R-Biopharm AG
10 th – 11 th Nov. 05	World Mycotoxin Forum Nordwijk aan Zee, Netherlands Representative: R-Biopharm AG
29 th Nov. – 1 st Dec. 05	SITEVI 2005 Salon International des Techniques et Equipements Viti-vinicoles Montpellier, France Stand B24 www.sitevi.com Representative: R-Biopharm AG

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

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