R-Biopharm – dedicated to food safety

# Product catalogue 2020

## Food & Feed Analysis

# **Product catalogue** 2020

Food & Feed Analysis

# Content

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- Applications for many matrices
- Analysis by RIDASOFT® Win.NET
- Can be automated

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- Modular, open test systems
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- Suitable for all common real-time thermal cyclers

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- Quality control materials
- Analytical standards for calibration (crystalline & liquid)
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- Test evaluation with RIDASOFT® Win.NET
- Tailored software solutions for test procedure

## Equipment/automation

- Small analyzer for on-site testing
- Automates for ELISA processing
- Instruments for online sample preparation and purification (HPLC)

# Enzymatic analysis for food and feed

**Enzymatic tests are widely used as analytical tools for the analysis of food products such as fruit juices, wine or beer, dairy products, eggs and meat. Enzymatic test kits determine sugars, acids, alcohols and a few other food components.**

They are based on high quality enzymes, enabling precise and specific measurements of each compound, even in complex matrices. Results are measured with a spectrophotometer, automation is possible. Numerous enzymatic methods have been approved or validated by international organisations.

The “Yellow line” kits are produced by Roche (previously Boehringer Mannheim), with more than 40 years of experience in the production of the enzymes, which are the key element of each test. The Roche test kits have been used and validated worldwide for several decades, with many corresponding publications. They have been selected as reference method by many international organizations and they are still the reference quality today.

As an alternative, R-Biopharm also offers the Enzytec™ *Generic* line, which includes enzymatic or colorimetric assays.

Enzytec™ *Liquid* kits are produced by R-Biopharm or by Thermo Scientific. These reagents are all liquid, ready-to-use and stable, so they can be placed directly on any biochemistry analyser and stay on board for true random-access.

The new product line RIDA®CUBE enables single testing. The test cartridges are ready-to-use and allow a rapid analysis. The RIDA®CUBE kits can only be used in combination with the RIDA®CUBE SCAN instrument.


## Roche "Yellow Line"

- Reference quality for more than 40 years
- 31 tests for all requirements in the food industry
- Produced by Roche Diagnostics

## Enzytec™ *Liquid*

- Liquid, ready-to-use reagents
- Stable until end of shelf-life, even after opening
- Easy and safe use on biochemistry analysers


## RIDA®CUBE SCAN

- Small but precise like a big biochemistry analyser
- Ready-to-use test cartridges for single testing
- Only one pipeting step and a result after 15 minutes

# Enzymatic food analysis

## "Yellow Line" Roche Diagnostics

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Acids** | **Enzymatic test** | | |
| Acetic acid | Enzymatic test (340 nm) | 3 x 11 determinations | 10148261035 |
| L-Ascorbic acid | Enzymatic test (578 nm) | 21 determinations | 10409677035 |
| Citric acid | Enzymatic test (340 nm) | 3 x 12 determinations | 10139076035 |
| Formic acid | Enzymatic test (340 nm) | 21 determinations | 10979732035 |
| D-Gluconic acid | Enzymatic test (340 nm) | 27 determinations | 10428191035 |
| L-Glutamic acid | Enzymatic test (492 nm) | 3 x 13 determinations | 10139092035 |
| D-3-Hydroxybutyric acid | Enzymatic test (492 nm) | 3 x 12 determinations | 10907979035 |
| D-Isocitric acid | Enzymatic test (340 nm) | 33 determinations | 10414433035 |
| D-/L-Lactic acid | Enzymatic test (340 nm) | 30 determinations each | 11112821035 |
| L-Lactic acid | Enzymatic test (340 nm) | 30 determinations | 10139084035 |
| D-Malic acid | Enzymatic test (340 nm) | 3 x 11 determinations | 11215558035 |
| L-Malic acid | Enzymatic test (340 nm) | 30 determinations | 10139068035 |
| Succinic acid | Enzymatic test (340 nm) | 11 determinations | 10176281035 |
| **Sugars** | **Enzymatic test** | | |
| D-Glucose | Enzymatic test (340 nm) | 3 x 45 determinations | 10716251035 |
| D-Glucose/D-Fructose | Enzymatic test (340 nm) | 27 determinations each | 10139106035 |
| Lactose/D-Galactose | Enzymatic test (340 nm) | 32 determinations | 10176303035 |
| Lactose/D-Glucose | Enzymatic test (340 nm) | 32 determinations each | 10986119035 |
| Maltose/Sucrose/D-Glucose | Enzymatic test (340 nm) | 15 determinations each | 11113950035 |
| Raffinose | Enzymatic test (340 nm) | 32 determinations | 10428167035 |
| Sucrose/D-Glucose | Enzymatic test (340 nm) | 22 determinations each | 10139041035 |
| Sucrose/D-Glucose/D-Fructose | Enzymatic test (340 nm) | 22 determinations each | 10716260035 |
| Starch | Enzymatic test (340 nm) | 27 determinations | 10207748035 |
| **Others** | **Enzymatic test** | | |
| Acetaldehyde | Enzymatic test (340 nm) | 3 x 11 determinations | 10668613035 |
| Ammonia | Enzymatic test (340 nm) | 50 determinations | 11112732035 |
| Urea/Ammonia | Enzymatic test (340 nm) | 25 determinations each | 10542946035 |
| Cholesterol | Enzymatic test (405 nm) | 31 determinations | 10139050035 |
| Ethanol | Enzymatic test (340 nm) | 33 determinations | 10176290035 |
| Glycerol | Enzymatic test (340 nm) | 3 x 11 determinations | 10148270035 |
| Nitrate | Enzymatic test (340 nm) | 3 x 13 determinations | 10905658035 |
| D-Sorbitol/Xylitol | Enzymatic test (492 nm) | 3 x 12 determinations | 10670057035 |
| Sulfite ($SO_2$) | Enzymatic test (340 nm) | 31 determinations | 10725854035 |

# Enzymatic food analysis

## Enzytec™ *Generic*

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Acids** | | | |
| Acetic acid | Enzymatic test (340 nm) | 2 x 16 determinations | E1226 |
| L-Ascorbic acid | Enzymatic test (578 nm) | 3 x 8 determinations | E1267 |
| Citric acid | Enzymatic test (340 nm) | 24 determinations | E1214 |
| D-Gluconic acid | Enzymatic test (340 nm) | 32 determinations | E1223 |
| D/L-Lactic acid | Enzymatic test (340 nm) | 32 determinations | E1255 |
| L-Lactic acid | Enzymatic test (340 nm) | 32 determinations | E1254 |
| L-Malic acid | Enzymatic test (340 nm) | 32 determinations | E1215 |
| Oxalic acid | Enzymatic test (590 nm) | 10 determinations | E2100 |
| **Sugars** | | | |
| D-Glucose | Enzymatic test (340 nm) | 32 determinations | E1210 |
| D-Glucose/D-Fructose | Enzymatic test (340 nm) | 32 determinations each | E1245 |
| Lactose/D-Galactose | Enzymatic test (340 nm) | 32 determinations | E1213 |
| Starch | Enzymatic test (340 nm) | 32 determinations | E1268 |
| Sucrose/D-Glucose | Enzymatic test (340 nm) | 16 determinations each | E1246 |
| Sucrose/D-Glucose/D-Fructose | Enzymatic test (340 nm) | 16 determinations each | E1247 |

## Enzytec™ *Color*

| | **Colorimetric assays** | | |
|---|---|---|---|
| β-Glucan (GlucaTest® S125) | Colorimetric test (550 nm) | 125 ml (40 tests) | E3500 |
| β-Glucan (GlucaTest® L500) | Colorimetric test (550 nm) | 4 x 125 ml (160 tests) | E3550 |
| Copper | Colorimetric test (580 nm) | 2 x 50 ml | E2400 |
| Iron | Colorimetric test (580 nm) | 4 x 100 ml | E2300 |
| Tartaric acid | Colorimetric test (520 nm) | 2 x 80 ml | E3100 |

## Miscellaneous

| | | | |
|---|---|---|---|
| Sample purifier | Sample preparation for Enzymatic tests | 20 samples | E2250 |
| Glucose remover | For removal of glucose excess in samples | 32 samples | E3400 |
| Cuvettes Holder | For 1 cm cuvettes with 2 x 8 positions | 1 pc. | 10019624035 |
| Plastic Spatulas | For mixing steps | 500 pcs. | 10019623035 |

# Enzymatic food analysis

## Enzytec™ *Liquid*

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Acids** | | | |
| Acetic acid | Enzymatic test (340 nm; for automation only) | 4 x 80 determinations | E5226 |
| D/L-Lactic acid* | Enzymatic test (340 nm) | 2 x 25 determinations | E8240 |
| L-Lactic acid | Enzymatic test (340 nm) | 2 x 25 determinations | E8260 |
| L-Malic acid | Enzymatic test (340 nm) | 2 x 25 determinations | E8280 |
| **Sugars** | | | |
| D-Galactose | Enzymatic test (340 nm) | 2 x 25 determinations | E8120 |
| D-Glucose | Enzymatic test (340 nm) | 2 x 25 determinations | E8140 |
| D-Glucose/D-Fructose | Enzymatic test (340 nm) | 2 x 25 determinations | E8160 |
| Lactose/D-Galactose* | Enzymatic test (340 nm) | 2 x 25 determinations | E8110 |
| Lactose/D-Glucose* | Enzymatic test (340 nm) | 2 x 25 determinations | E8130 |
| Sucrose/D-Glucose* | Enzymatic test (340 nm) | 2 x 25 determinations | E8180 |
| Sucrose/D-Glucose/D-Fructose* | Enzymatic test (340 nm) | 2 x 25 determinations | E8190 |
| **Others** | | | |
| Ammonia | Enzymatic test (340 nm) | 4 x 10 determinations | E5390 |
| Ethanol<br>AOAC Official Method First Action | Enzymatic test (340 nm) | 2 x 25 determinations | E8340 |
| Glycerol | Enzymatic test (340 nm) | 4 x 10 determinations | E5360 |
| $SO_2$-Total (Total Sulfite) | Colorimetric test (340 nm) | 2 x 50 tests | E8600 |
| $SO_2$-Free (Free Sulfite) | Colorimetric test (340 nm) | 2 x 50 tests | E8610 |

## Standards

| | | | |
|---|---|---|---|
| Multi-acid Standard manual | Multi-acid assay control solution | 9 ml | E1240 |
| Multi-acid Standard for automation | Multi-acid calibration solution for automation | 9 ml | E1241 |
| Alcohol Standard | Alcohol assay control solution | 10 x 1 ml | E5420 |
| Sugar Standard manual | Multi-sugar assay control solution | 9 ml | E1242 |
| Sugar combination standard | Multi-sugar assay control solution | 3 x 3 ml | E5440 |
| Sugar standard for automation | Multi-sugar calibration solution for automation | 3 x 3 ml | E5450 |

* Without differentiation.

## RIDA®CUBE (only for RIDA®CUBE SCAN**)

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Acids** | **Ready-to-use cartridges** | | |
| Acetic acid | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4226 |
| D/L-Lactic acid* | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4240 |
| L-Lactic acid | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4260 |
| L-Malic acid | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4280 |
| **Sugars** | | | |
| D-Galactose | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4120 |
| Glucose | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4140 |
| D-Glucose/D-Fructose* | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4160 |
| Lactose/D-Galactose* | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4110 |
| Lactose/D-Glucose* | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4130 Coming soon |
| Sucrose/D-Glucose* | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4180 |
| Sucrose/D-Glucose/D-Fructose* | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4190 |
| **Others** | | | |
| Ethanol | Enzymatic test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4340 |
| $SO_2$-Free (Free Sulfite) | Colorimetric test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4610 Coming soon |
| $SO_2$-Total (Total Sulfite) | Colorimetric test only with RIDA®CUBE SCAN (340 nm) | 32 determinations | RCS4600 |

* Without differentiation.

** See page 92 – • Equipment/software/accessories.

# Enzymatic food analysis

| | "Yellow Line"<br>Roche Diagnostics, the reference method | Enzytec™ *Liquid*<br>Liquid, ready to use and stable reagents | RIDA®CUBE SCAN<br>Single-test cartridges |
|---|---|---|---|
| **Acids** | | | |
| Acetic acid (340 nm) | 10148261035 | E5226 | RCS4226 |
| L-Ascorbic acid (578 nm) | 10409677035 | | |
| Citric acid (340 nm) | 10139076035 | | |
| Formic acid (340 nm) | 10979732035 | | |
| Gluconic acid (340 nm) | 10428191035 | | |
| Glutamic acid (492 nm) | 10139092035 | | |
| D-3-Hydroxybutyric acid (492 nm) | 10907979035 | | |
| D-Isocitric acid (340 nm) | 10414433035 | | |
| D/L-Lactic acid (340 nm) | 11112821035 | E8240 | RCS4240 |
| L-Lactic acid (340 nm) | 10139084035 | E8260 | RCS4260 |
| D-Malic acid (340 nm) | 11215558035 | | |
| L-Malic acid (340 nm) | 10139068035 | E8280 | RCS4280 |
| Oxalic acid (580 nm) | | E2100 | |
| Succinic acid (340 nm) | 10176281035 | | |
| Tartaric acid (520/546 nm) | | E3100 | |
| **Sugars** | | | |
| ß-Glucan (546 nm) | | E3500/E3550 | |
| D-Glucose (340 nm) | 10716251035 | E8140 | RCS4140 |
| D-Glucose/D-Fructose (340 nm) | 10139106035 | E8160 | RCS4160 |
| Lactose/D-Galactose (340 nm) | 10176303035 | E8110/E8120 | |
| Lactose/D-Glucose (340 nm) | 10986119035 | E8130/E8140 | |
| Maltose/Sucrose/D-Glucose (340 nm) | 1113950035 | | |
| Raffinose (340 nm) | 10428167035 | | |
| Starch (340 nm) | 10207748035 | | |
| Sucrose/D-Glucose (340 nm) | 10139041035 | E8180/E8140 | RCS4180 |
| Sucrose/D-Glucose/D-Fructose (340 nm) | 10716260035 | E8190 | RCS4190 |
| **Others** | | | |
| Acetaldehyde (340 nm) | 10668613035 | | |
| Ammonia (340 nm) | 1112732035 | E5390 | |
| Urea/Ammonia (340 nm) | 10542946035 | | |
| Cholesterol (405 nm) | 10139050035 | | |
| Copper (580 nm) | | E2400 | |
| Ethanol (340 nm) | 10176290035 | E8340 | RCS4340 |
| Glycerol (340 nm) | 10148270035 | E5360 | |
| Iron (580 nm) | | E2300 | |
| Nitrate (340 nm) | 10905658035 | | |
| D-Sorbitol/Xylitol (492 nm) | 10670057035 | | |
| Free Sulfite (340 nm) | | E8610 | RCS4610 |
| Total Sulfite (340 nm) | 10725854035 | E8600 | RCS4600 |
| **Standards** | | | |
| Alcohol standard | | E5420 | |
| Multi-acid standards (low and high) | | E1240/E1241 | |
| Multi-sugar standards (low and high) | | E5440/E5450 | |

# Vitamin analysis in food, feed and vitamin containing products

**Food products are now being enriched and fortified with vitamins in many forms. But does the amount present in the food at the end of the shelf life match the label on the package?**

Food manufacturers, regulatory agencies and commercial laboratories should therefore have analytical methods on hand that allow them to quickly and reliably determine the natural and added vitamin content of food products.

**Product testing:**
There are different methods for analyzing water soluble vitamins: ELISA, immuno-affinity columns (IAC), microbiological and enzymatic microtiter plate tests. The RIDASCREEN®FAST Vitamin B12 and Folic Acid tests allow a quantitative determination of both vitamins within 1 h. The total vitamin B12 content is determined without using cyanide. Regarding folic acid the added vitamin content is determined.

When using immunoaffinity columns in conjunction with HPLC or LC-MS/MS, the sample is purified and the vitamin is retained by the antibody in the column. Using the EASI-EXTRACT® VITAMIN B12 and BIOTIN (columns), you can determine the total vitamin content. With the EASI-EXTRACT® FOLIC ACID (column) you can only determine added folic acid. Depending on the sample preparation the added or total vitamin content can be determined with the microbiological VitaFast® test. With the enzymatic VitaFast® Vitamin C test in microtiter plate format a determination of total vitamin C content (L-ascorbic acid and L-dehydroascorbic acid) is possible.


## VitaFast®
## Microbiological test

- Samples with an added or natural vitamin content can be analyzed
- Method in conformity with official guidelines (Section 64 of the German Food & Feed Act, AOAC)
- AOAC-RI certification for some VitaFast® tests
- Ready-to-use reagents and standards for 96 determinations
- Results available within 24 - 48 hours

## EASI-EXTRACT®
## Immunoaffinity columns

- Isolation and concentration of the vitamin
- Pigments and interfering compounds are removed
- High recovery and low CV‘s

## RIDASCREEN®
## ELISA

- Determination of total vitamin B12 content
- Determination of added vitamin (folic acid)
- One sample preparation procedure and one identical sample buffer for RIDASCREEN®FAST B12 and Folic Acid
- Results within 1 hour
- Ideal for process control

# Vitamins

## VitaFast®

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Microbiological microtiter plates** | | |
| VitaFast® Folsäure/Folic Acid AOAC-RI 100903 | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.018 µg/100 g (ml) | 96 determinations | P1001 |
| VitaFast® Vitamin B12 (Cyanocobalamin) AOAC-RI 101002 | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.021 µg/100 g (ml) | 96 determinations | P1002 |
| VitaFast® Vitamin B7 (Biotin) AOAC-RI 101001 | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.013 µg/100 g (ml) | 96 determinations | P1003 |
| VitaFast® Vitamin B3 Niacin | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.0048 mg/100 g (ml) | 96 determinations | P1004 |
| VitaFast® Pantothensäure/Pantothenic Acid AOAC-RI 100904 | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.0035 mg/100 g (ml) | 96 determinations | P1005 |
| VitaFast® Vitamin B1 (Thiamin) | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.008 mg/100 g (ml) | 96 determinations | P1006 |
| VitaFast® Vitamin B2 (Riboflavin) AOAC-RI 100902 | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.0018 mg/100 g (ml) | 96 determinations | P1007 |
| VitaFast® Vitamin B6 (Pyridoxin) | Quantitative determination of the total vitamin content (added and natural) or of the added vitamin only Limit of detection: 0.0002 mg/100 g (ml) | 96 determinations | P1008 |
| VitaFast® Inositol | Quantitative determination of the total vitamin content (added and natural) Limit of detection: 0.5 mg/100 g (ml) | 96 determinations | P1009 |
| | **Enzymatic microtiter plate** | | |
| VitaFast® Vitamin C (L-Ascorbic Acid) | Quantitative determination of vitamin C (L-ascorbic acid and L-dehydroascorbic acid) possible Limit of detection: 7.8 mg/100 g (ml) | 50 determinations | P1010 |
| | **Spiking standards** | | |
| VitaFast® Folsäure/Folic Acid Spiking Standard | Folic Acid in solid form | 3 vials | P3001 |
| VitaFast® Vitamin B12 (Cyanocobalamin) Spiking Standard | Cyanocobalamin in solid form | 3 vials | P3002 |
| VitaFast® Vitamin B7 (Biotin) Spiking Standard | D-Biotin in solid form | 3 vials | P3003 |
| VitaFast® Pantothensäure/Pantothenic Acid Spiking Standard | Ca-D-Pantothenat in solid form | 3 vials | P3005 |
| | **Enzyme** | | |
| VitaFast® Chicken Pancreatin | Enzyme for sample preparation for determination of natural folic acid | 1 vial for 50 sample preparations | P2002 |

# Vitamins

## EASI-EXTRACT®

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Immunoaffinity columns** | | |
| EASI-EXTRACT® VITAMIN B12 | Immunoaffinity columns for sample clean-up prior to the analysis of vitamin B12 using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP80<br>RBRP80B |
| EASI-EXTRACT® VITAMIN B12 (LGE)<br>AOAC „Final Action“ certified | Immunoaffinity columns for sample clean-up prior to the analysis of vitamin B12 using HPLC or LC-MS/MS | 10 columns (10 ml format)<br>50 columns (10 ml format) | RBRP88<br>RBRP88B |
| EASI-EXTRACT® FOLIC ACID | Immunoaffinity columns for sample clean-up prior to the analysis of folic acid using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP81<br>RBRP81B |
| EASI-EXTRACT® BIOTIN<br>AOAC „First Action“ certified | Immunoaffinity columns for sample clean-up prior to the analysis of biotin using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP82<br>RBRP82B |
| EASI-EXTRACT® MULTI-VIT B (LGE) | Immunoaffinity columns for sample clean-up prior to the analysis of biotin, vitamin B12 and folic acid using HPLC | 10 columns (10 ml format)<br>50 columns (10 ml format) | RBRP183<br>RBRP183B |

## IMMUNOPREP® automated online analysis

| | | | |
|---|---|---|---|
| | **Online Immunoaffinity columns** | | |
| IMMUNOPREP® ONLINE VITAMIN B12 | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of vitamin B12 with HPLC | 48 cartridges<br>96 cartridges | RBRP905/48<br>RBRP905/96 |

## RIDASCREEN®

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Vitamin B12 | Enzyme immunoassay for quantitative analysis of total vitamin B12 in fortified food and vitamin products<br>Limit of detection: 0.5 µg/kg | 48 determinations<br>Incubation time: 25 min | R2103 |
| RIDASCREEN® Folsäure (Folic Acid) | Enzyme immunoassay for quantitative analysis of added folic acid in fortified food and vitamin products<br>Limit of detection: 0.5 µg/kg | 48 determinations<br>Incubation time: 25 min | R3203 |

# Vitamins

| Vitamins | VitaFast® | EASI-EXTRACT® | RIDASCREEN® |
|---|---|---|---|
| | Microbiological/enzymatic tests | Immunoaffinity columns | ELISA |
| Folsäure/Folic Acid | ● | ● | ● |
| Vitamin B12 (Cyanocobalamin) | ● | ● | ● |
| Vitamin B7 (Biotin) | ● | ● | |
| Vitamin B3 (Niacin) | ● | | |
| Pantothensäure/Pantothenic Acid | ● | | |
| Vitamin B1 (Thiamin) | ● | | |
| Vitamin B2 (Riboflavin) | ● | | |
| Vitamin B6 (Pyridoxin) | ● | | |
| Inositol | ● | | |
| Vitamin C | ● | | |

| Vitamins | VitaFast® tests |
|---|---|
| Folic Acid Spiking standard | ● |
| Vitamin B12 Spiking standard | ● |
| Biotin Spiking standard | ● |
| Pantothenic Acid Spiking standard | ● |
| Chicken Pancreatin | ● |

# Mycotoxin analysis in food and feed

**Mycotoxins are toxic secondary metabolites produced by fungi (moulds). Mycotoxins can be formed in agricultural products, such as cereals, and can also occur in related food, meat and dairy products originating from farm animals.**

Due to the frequent occurrence of mycotoxins and their severe toxic effects on animals and humans, maximum levels (MIs) for the major mycotoxins have been set by legislative bodies. In accordance with these guidelines specific sample preparation and detection methods were developed. These include enzyme immunoassays, lateral flow devices or immunoaffinity columns, etc.

**R-Biopharm assays for the screening of mycotoxins in food and feed:**

- RIDASCREEN® enzyme immunoassays (ELISAs) use the high specificity of antigen and antibody interaction to determine and quantify mycotoxins by photometric measurement.
- RIDA®QUICK lateral flow tests are immunochromatographic tests for the quantitative determination of mycotoxins with the innovative RIDA®SMART APP software or the RIDA®QUICK SCAN reader.
- Test cards, AFLACARD and OCHRACARD, allow a qualitative screening of mycotoxins at various levels in food and feed commodities.
- Immunoaffinity columns (RIDA®, EASI-EXTRACT®, PREP®) use the high specificity of antigen and antibody interaction to isolate, purify and concentrate mycotoxins from many complex matrices prior to ELISA or chromatographic analysis.
- Clean-up columns (PuriTox) are solid phase columns for the purification of mycotoxin contaminated samples prior to chromatographic analysis.

## RIDA®QUICK

Lateral flow assay

- Easy and quantitative on-site testing
- Fast and reliable

Innovative smartphone-based evaluation of all quantitative tests with RIDA®SMART APP is available

## RIDASCREEN®

ELISA tests for up to 96 determinations

- Highly sensitive
- Specific

## RIDASCREEN®FAST

ELISA for up to 48/96 determinations

- Specific
- Fast and reliable


## PREP®, EASI-EXTRACT®, RIDA®

Immunoaffinity columns

- Single or multi-toxin analysis in conjunction with HPLC, LC-MS/MS or ELISA
- For a wide range of matrices

## PuriTox

Solid phase columns

- Rapid purification prior to HPLC, GC or LC-MS/MS

# Mycotoxins

## Aflatoxins

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Aflatoxin M1 | Enzyme immunoassay for quantitative determination of aflatoxin M1 in milk and milk powder*<br>Detection limit: 5 ng/L (milk/milk powder), 50 ng/L (milk powder) | 96 determinations<br>Incubation time: 1 hr 15 min | R1121 |
| RIDASCREEN®FAST Aflatoxin M1 | Enzyme immunoassay for quantitative determination of aflatoxin M1 in milk and milk powder<br>Detection limit: < 125 ng/kg | 48 determinations<br>Incubation time: 15 min | R5812 |
| RIDASCREEN® Aflatoxin B1 30/15 | Enzyme immunoassay for quantitative determination of aflatoxin B1 in cereals and feed<br>Detection limit: 1 µg/kg (cereals), 1.7 µg/kg (soy), 2 µg/kg (dry cat food), 4 µg/kg (feed) | 96 determinations<br>Incubation time: 45 min | R1211 |
| RIDASCREEN® Aflatoxin Total | Enzyme immunoassay for quantitative determination of aflatoxin in cereals and feed*<br>Detection limit: 1.75 µg/kg | 96 determinations<br>Incubation time: 45 min | R4701 |
| RIDASCREEN®FAST Aflatoxin | Enzyme immunoassay for quantitative determination of aflatoxins in cereals and feed*<br>Detection limit: 1.7 µg/kg | 48 determinations<br>Incubation time: 15 min | R5202 |
| RIDASCREEN®FAST Aflatoxin SC | Enzyme immunoassay for quantitative determination of aflatoxins in cereals and feed<br>Detection limit: 2 µg/kg | 48 determinations<br>Incubation time: 15 min | R9002 |
| | **Immunoaffinity columns** | | |
| AFLAPREP® | Immunoaffinity columns for sample clean-up prior to the analysis of aflatoxins B1, B2, G1 and G2 using HPLC or LC-MS/MS | 10 columns (1 ml format)<br>50 columns (1 ml format) | RBRDP07<br>RBRP07 |
| AFLAPREP® M | Immunoaffinity columns for sample clean-up prior to the analysis of aflatoxin M1 using HPLC or LC-MS/MS | 10 columns (1 ml format)<br>25 columns (1 ml format) | RBRDP04<br>RBRP04 |
| AFLAPREP® M WIDE | Immunoaffinity columns for sample clean-up prior to the analysis of aflatoxin M1 using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP124<br>RBRP124B |
| EASI-EXTRACT® AFLATOXIN | Immunoaffinity columns for sample clean-up prior to the analysis of aflatoxins B1, B2, G1 and G2 using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRRP71<br>RBRRP70N |
| RIDA® Aflatoxin column | Immunoaffinity columns for sample clean-up prior to ELISA | 10 columns (1 ml format)<br>50 columns (1 ml format) | R5001<br>R5002 |
| | **Solid phase columns** | | |
| PuriTox Aflatoxin | Solid phase column for sample clean-up prior to the analysis of total aflatoxins using HPLC or LC-MS/MS | 50 columns (syringe format) | RBRP25 |
| | **Test strips** | | |
| RIDA®QUICK Aflatoxin RQS | Immunochromatographic test for the quantitative determination of aflatoxin in corn in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software<br>Detection limit: < 2 µg/kg | 20 strips<br>Incubation time: 3 min | R5208 |
| RIDA®QUICK Aflatoxin RQS ECO | Immunochromatographic test with aqueous extraction for the quantitative determination of aflatoxin in corn in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software<br>Detection limit: < 2 µg/kg | 20 strips<br>Incubation time: 5 min | R5209 |
| | **Test cards** | | |
| AFLACARD B1 | Qualitative detection of aflatoxin B1 at various screening levels | 20 determinations | RBRP27 |
| AFLACARD TOTAL | Qualitative detection of total aflatoxins at various screening levels | 20 determinations | RBRP38 |

* Further applications on request.

## Ochratoxin A

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Ochratoxin A 30/15 | Enzyme immunoassay for quantitative determination of ochratoxin A in cereals, feed, beer and pig serum* Detection limit: 1.25 µg/kg (cereals/feed), approx. 50 ng/kg (beer/pig serum) | 96 determinations Incubation time: 45 min | R1311 |
| RIDASCREEN®FAST Ochratoxin A | Enzyme immunoassay for quantitative determination of ochratoxin A in cereals and feed; Detection limit: 1.3 µg/kg (corn), 1.5 µg/kg (wheat, barley), 2.0 µg/kg (oats) and 2.8 µg/kg (feed) | 48 determinations | R5402 |
| | **Immunoaffinity columns** | | |
| OCHRAPREP® | Immunoaffinity columns for sample clean-up prior to the analysis of ochratoxin A using HPLC or LC-MS/MS | 10 columns (3 ml format) 50 columns (3 ml format) | RBRP14 RBRP14B |
| RIDA® Ochratoxin A column | Immunoaffinity columns for sample clean-up prior to ELISA | 10 columns (1ml format) | R1303 |
| | **Test cards** | | |
| OCHRACARD | Qualitative detection of ochratoxin A at various screening levels | 20 determinations + 20 Immunoaffinity columns | RBRP48 |

## Zearalenone

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Zearalenon | Enzyme immunoassay for quantitative determination of zearalenone in cereals, feed, beer, serum and urine* Detection limits: 50 ng/L (serum/urine), 250 ng/L (beer), 1750 ng/kg (cereals/feed) | 96 determinations Incubation time: 2 hrs 30 min | R1401 |
| RIDASCREEN®FAST Zearalenon | Enzyme immunoassay for quantitative determination of zearalenone in cereals and feed Detection limit: 17 - 41 µg/kg | 48 determinations Incubation time: 15 min | R5502 |
| RIDASCREEN®FAST Zearalenon SC | Enzyme immunoassay for quantitative determination of zearalenone in cereals Detection limit: 5 µg/kg | 48 determinations Incubation time: 15 min | R5505 |
| | **Immunoaffinity columns** | | |
| EASI-EXTRACT® ZEARALENONE | Immunoaffinity columns for sample clean-up prior to the analysis of zearalenone using HPLC or LC-MS/MS | 10 columns (3 ml format) 50 columns (3 ml format) | RBRRP91 RBRRP90 |
| | **Test strips** | | |
| RIDA®QUICK Zearalenon RQS | Immunochromatographic test for the quantitative determination of zearalenone in corn in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software Detection limit: 75 µg/kg (RIDA®QUICK SCAN), 50 µg/kg (RIDA®SMART APP) | 20 strips Incubation time: 5 min | R5504 |

* Further applications on request.

# Mycotoxins

## DON (Vomitoxin)

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® DON | Enzyme immunoassay for quantitative determination of deoxynivalenol in cereals, malt, feed, beer and wort<br>Detection limits: 18.5 µg/kg (cereals/malt/feed) and 3.7 µg/kg (beer/wort) | 96 determinations<br>Incubation time: 45 min | R5906 |
| RIDASCREEN®FAST DON<br>AOAC RI 000701 | Enzyme immunoassay for quantitative determination of DON in cereals, malt and feed<br>Detection limit: < 0.2 mg/kg | 96 determinations<br>48 determinations<br>Incubation time: 8 min | R5901<br>R5902 |
| RIDASCREEN®FAST DON SC<br>GIPSA/FGIS 2014-052 | Enzyme immunoassay for quantitative determination of DON in cereals, malt and feed<br>Detection limit: 0.074 mg/kg | 48 determinations<br>Incubation time: 8 min | R5905 |
| | **Immunoaffinity columns** | | |
| DONPREP® | Immunoaffinity columns for sample clean-up prior to the analysis of deoxynivalenol using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP50<br>RBRP50B |
| | **Test strips** | | |
| RIDA®QUICK DON RQS ECO | Immunochromatographic test for the quantitative determination of DON in grain in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software<br>Detection limit: < 0.25 mg/kg | 20 strips<br>Incubation time: 3 min | R5911 |

## Fumonisins

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Fumonisin | Enzyme immunoassay for quantitative analysis of fumonisins in corn and corn products<br>Detection limit: 25 µg/kg | 96 determinations<br>Incubation time: 45 min | R3401 |
| RIDASCREEN®FAST Fumonisin<br>GIPSA/FGIS 2016-081 | Enzyme immunoassay for quantitative determination of fumonisins in cereals and feed<br>Detection limit: 0.222 mg/kg | 48 determinations<br>Incubation time: 15 min | R5602 |
| | **Immunoaffinity columns** | | |
| FUMONIPREP® | Immunoaffinity columns for sample clean-up prior to the analysis of fumonisins B1, B2 and B3 using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRDP31<br>RBRP31B |
| | **Test strips** | | |
| RIDA®QUICK Fumonisin RQS ECO | Immunochromatographic test for the quantitative determination of fumonisin in corn in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software<br>Detection limit: 0.3 mg/kg | 20 strips<br>Incubation time: 5 min | R5606 |

## T-2 Toxin

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® T-2 Toxin | Enzyme immunoassay for quantitative determination of T-2 toxin in cereals and feed<br>Detection limit: approx. 7 µg/kg (barley, rye, corn, wheat), approx. 11 µg/kg (oats) | 96 determinations<br>Incubation time: 1 hr 30 min | R3801 |
| RIDASCREEN®FAST T-2 Toxin | Enzyme immunoassay for quantitative determination of T-2 toxin in cereals and feed<br>Detection limit: < 20 µg/kg | 48 determinations<br>Incubation time: 15 min | R5302 |

## T-2/HT-2 Toxin

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® T-2/HT-2 Toxin | Enzyme immunoassay for quantitative determination of T-2/HT-2 toxin in oats, corn, barley and wheat<br>Detection limit: 16 µg/kg (oats), 12 µg/kg (corn), 21 µg/kg (wheat), 33 µg/kg (barley) | 96 determinations<br>Incubation time: 45 min | R3805 |
| | **Immunoaffinity columns** | | |
| EASI-EXTRACT® T-2 & HT-2 Toxin | Immunoaffinity columns for sample clean-up prior to the analysis of T-2 and HT-2 using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP43<br>RBRP43B |
| | **Test strips** | | |
| RIDA®QUICK T-2/HT-2 RQS ECO | Immunochromatographic test for or quantitative determination of T-2/HT-2 toxin in oats, corn, and wheat in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software<br>Detection limit: 50 µg/kg | 20 strips<br>Incubation time: 5 min | R5304 |

## Citrinin

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Citrinin | Enzyme immunoassay for quantitative determination of citrinin in cereals and feed<br>Detection limit: 15 µg/kg | 48 determinations<br>Incubation time: 25 min | R6302 |
| | **Immunoaffinity columns** | | |
| EASI-EXTRACT® CITRININ | Immunoaffinity columns for sample clean-up prior to the analysis of citrinin using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>25 columns (3 ml format) | RBRDP126<br>RBRP126 |

# Mycotoxins

## Multi Toxin

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Immunoaffinity columns** | | |
| DZT MS-PREP® | Immunoaffinity columns for sample clean-up prior to the analysis of deoxynivalenol, zearalenone, T-2 and HT-2 using LC-MS/MS | 10 columns (1 ml format)<br>50 columns (1 ml format) | RBRP73<br>RBRP73B |
| AFLAOCHRA PREP® | Immunoaffinity columns for sample clean-up prior to the analysis of total aflatoxins and ochratoxin A using HPLC or LC-MS/MS | 10 columns (1 ml format)<br>50 columns (1 ml format) | RBRP89<br>RBRP89B |
| AOF MS-PREP® | Immunoaffinity columns for sample clean-up prior to the analysis of total aflatoxins, ochratoxin A and fumonisin using LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP115<br>RBRP115B |
| AO ZON PREP® | Immunoaffinity columns for sample clean-up prior to the analysis of total aflatoxins, ochratoxin A and zearalenone using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP112<br>RBRP112B |
| | **Solid phase columns** | | |
| 11+Myco MS-PREP® | Immunoaffinity columns for the sample clean-up prior to the analysis of total aflatoxins, deoxynivalenol, fumonisin, ochratoxin A, T-2, HT-2 and zearalenone using LC-MS/MS | 10 columns 3 ml (format)<br>50 columns 3 ml (format) | RBRP128<br>RBRP128B |
| PuriTox AflaZON | Solid phase column for sample clean-up prior to the analysis of total aflatoxins and zearalenone using HPLC or LC-MS/MS | 25 columns<br>(syringe format) | TC-M160 |
| PuriTox Total Myco-MS | Solid phase column for sample clean-up prior to the analysis of total aflatoxins, ochratoxin A, DON, 3-acetyl DON, 15-acetyl DON, ZON, T-2, HT-2, FB1, FB2 and FB3 using LC-MS/MS | 25 columns<br>(syringe format) | TC-MT3000 |

## Trichothecene

| | | | |
|---|---|---|---|
| | **Solid phase columns** | | |
| Puritox Trichothecene | Solid phase column for clean-up prior to the analysis of trichothecenes using GC or LC-MS/MS | 25 columns<br>(syringe format) | TC-T220 |
| Puritox DON/NIV | Solid phase column for clean-up prior to the analysis of deoxynivalenol and nivalenol using GC or LC-MS/MS | 25 columns<br>(gravity flow format) | TC-C210 |

## Patulin

| | | | |
|---|---|---|---|
| | **Enzyme** | | |
| Pectinase | An enzyme for the clarification of cloudy apple juice and apple purée prior to patulin analysis | 100 determinations | RBRP129 |
| | **Molecularly imprinted columns** | | |
| EASIMIP™ PATULIN | Molecularly imprinted columns for sample clean-up prior to the analysis of patulin using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP250<br>RBRP250B |

## Sterigmatocystin

| | | | |
|---|---|---|---|
| | **Immunoaffinity columns** | | |
| EASI-EXTRACT® STERIGMATOCYSTIN | Immunoaffinity columns for sample clean-up prior to the analysis of sterigmatocystin using HPLC or LC-MS/MS | 10 columns (3 ml format)<br>50 columns (3 ml format) | RBRP125<br>RBRP125B |

# Mycotoxins

| | RIDASCREEN® | RIDA®QUICK | Rhône | RIDA® EASI-EXTRACT® PREP® IMMUNOPREP® | PuriTox EASIMIP® | Rhône TRILOGY® | TRILOGY® |
|---|---|---|---|---|---|---|---|
| | ELISA | Lateral Flow | Test cards | Immunoaffinity columns | Clean-up columns | Standards | Reference material |
| **Mycotoxins** | | | | | | | |
| Aflatoxins | | | | | | | |
| • Total | ● | ● | ● | ● | ● | ● | ● |
| • B1 | ● | | ● | | | ● | |
| • M1 | ● | | | ● | | ● | |
| Citrinin | ● | | | ● | | ● | |
| DON | ● | ● | | ● | ● | ● | ● |
| Fumonisins | ● | ● | | ● | ● | ● | ● |
| Multi Toxin | | | | ● | ● | ● | ● |
| Ochratoxin A | ● | | ● | ● | ● | ● | ● |
| Patulin | | | | | ● | ● | |
| Sterigmatocystin | | | | ● | | | |
| T-2 Toxin | ● | | | ● | ● | ● | ● |
| T-2 & HT-2 Toxin | ● | ● | | ● | ● | ● | ● |
| Trichothecenes | | | | | ● | ● | ● |
| Zearalenone | ● | ● | | ● | ● | ● | ● |

# Automated online analysis of mycotoxins in food and feed

**IMMUNOPREP® ONLINE immunoaffinity cartridges are used together with the RIDA®CREST or RIDA®CREST ICE handling system to combine automated online sample preparation with quantitative analysis of the mycotoxin of interest.**

The immunoaffinity cartridge contains a monoclonal antibody that is specific for the mycotoxin, coupled to a hydrophilic polymer that can withstand high pressure. The RIDA®CREST or RIDA®CREST ICE system enables the use of the IMMUNOPREP® ONLINE cartridges to be incorporated directly with HPLC, UHPLC or LC-MS/MS systems.

The IMMUNOPREP® ONLINE cartridge offers highly specific, sensitive, rapid and automated analysis. The sample application, washing and elution is performed online for up to 15 injections before the cartridge is automatically removed and replaced with a new one. This level of reuse has been found to offer optimum cartridge performance and removes the chance of interference or carryover.

Following extraction of the toxin from the sample with solvent, the extract is filtered, diluted and transferred to an autosampler vial. The diluted extract is injected onto the immunoaffinity cartridge and any toxin present in the sample is retained by antibody in the cartridge. Unbound matrix material is then automatically removed by washing the cartridge and the resulting wash goes to waste. Subsequently the toxins are released from the antibody following online elution with the mobile phase and the complete elution fraction from the cartridge is quantitatively analysed for the mycotoxin of interest.

## IMMUNOPREP® ONLINE

- Improved Quality Assurance
- Improved Traceability and Efficiency
- Reusable cartridges
- Increased sample throughput
- Potential cost savings
- New platform technology: RIDA®CREST or RIDA®CREST ICE

## Automated online analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Aflatoxins** | **Online immunoaffinity cartridges** | | |
| IMMUNOPREP® ONLINE AFLATOXIN | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of aflatoxins B1, B2, G1 and G2 with HPLC | 48 cartridges<br>96 cartridges | RBRP900/48<br>RBRP900 |
| IMMUNOPREP® ONLINE AFLATOXIN M1 | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of aflatoxins M1 with HPLC | 48 cartridges | RBRP904/48 |
| **Ochratoxin A** | **Online immunoaffinity cartridges** | | |
| IMMUNOPREP® ONLINE OCHRATOXIN | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of ochratoxin A with HPLC | 48 cartridges<br>96 cartridges | RBRP901/48<br>RBRP901 |
| **DON (Vomitoxin)** | **Online immunoaffinity cartridges** | | |
| IMMUNOPREP® ONLINE DEOXYNIVALENOL | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of deoxynivalenol with HPLC | 48 cartridges | RBRP902/48 |
| **Zearalenone** | **Online immunoaffinity cartridges** | | |
| IMMUNOPREP® ONLINE ZEARALENONE | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of zearalenone with HPLC | 48 cartridges<br>96 cartridges | RBRP903/48<br>RBRP903 |
| **Fumonisins** | **Online immunoaffinity cartridges** | | |
| IMMUNOPREP® ONLINE FUMONISIN | Online immunoaffinity cartridges used in conjunction with the RIDA®CREST handling system for the automated clean-up and analysis of fumonisins with HPLC | 48 cartridges<br>96 cartridges | RBRP905/48<br>RBRP905 |

# Trilogy® naturally contaminated materials and mycotoxin standards

**Trilogy® Analytical Laboratory is one of the few producers of certified, naturally contaminated reference materials and certified mycotoxin standards . Additionally, naturally contaminated quality control materials and analytical standards for daily quality assurance are available.**

Trilogy® is a full service ISO 17025-accredited laboratory and accredited as a reference material producer according to ISO 17034. In cooperation with Trilogy®, we offer naturally contaminated certified reference materials and certified mycotoxin standards with metrological traceability. The fields of application of these highly characterized products range from method validation in ISO 17025 accredited labs to instrument calibration. Certified reference materials are available in 100 g packs of selected matrices. Both single and multitoxin options are available. Certified standard solutions contain one mycotoxin each, dissolved in organic solvents.

Trilogy® quality control materials are naturally contaminated homogeneous products that contain a specific concentration of one or more mycotoxins. These materials have various applications including daily quality assurance, technician training, troubleshooting, proficiency testing and quality documentation. Trilogy® quality control materials are available containing the major mycotoxins in various matrices and levels of contamination: Aflatoxin, Ochratoxin, Zearalenone, Deoxynivalenol and Fumonisin contaminated materials are available, as well as multi-toxin QC materials. Commodities include corn and corn by-products, wheat, barley and malted barley, oats as well as complex products such as animal feed, pet food and spices. Samples are available in 100 g re-sealable foil packs.

Trilogy® also provides over 30 analytical standards for a wide range of mycotoxins, in solvents and in dry form. The Trilogy® analytical standards can be used for spiking experiments in order to check laboratory performance or for the analysis of mycotoxins by HPLC, GC or LC-MS/MS. Trilogy® dried standards are very easy to use. A simple reconstitution step reduces the need to handle hazardous mycotoxin powders. The liquid standards are ready to use and contain mycotoxins in dissolved specified organic solvents. They are both intended for use by customers who do not have a spectrophotometer or for those who want to ensure accurate HPLC/GC/LC-MS/MS determination of mycotoxins with minimal preparation and effort.

## Certified Trilogy® mycotoxin products (according to ISO 17034)

**Certified mycotoxin standards**

- Ready-to-use liquids
- Single toxin solutions available
- Metrological traceability

**Certified reference materials**

- Naturally contaminated
- Single and multitoxin options available
- Metrological traceability

## Trilogy® quality control products for daily use

**Quality control materials**

- Naturally contaminated
- Single and multitoxin products available
- Cereals, corn, rice, and more
- Complex matrices like feed

**Analytical standards**

- Dried standard substances
- Ready-to-use standards, liquid
- Single and multitoxin options available

# Mycotoxins

## Certified Trilogy® Reference Materials for mycotoxin analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Certified Reference Material** | **Food or feed product** | | |
| Certified Trilogy® Reference Material Aflatoxin | Commodities and contamination levels available upon request | 100 g | CTRM-A100 |
| Certified Trilogy® Reference Material DON | Commodities and contamination levels available upon request | 100 g | CTRM-D100 |
| Certified Trilogy® Reference Material Fumonisin | Commodities and contamination levels available upon request | 100 g | CTRM-F100 |
| Certified Trilogy® Reference Material Ochratoxin | Commodities and contamination levels available upon request | 100 g | CTRM-O100 |
| Certified Trilogy® Reference Material Zearalenone | Commodities and contamination levels available upon request | 100 g | CTRM-Z100 |
| Certified Trilogy® Reference Material Multitoxin | Commodities, mycotoxins and contamination levels available upon request | 100 g | CTRM-MT100 |

## Certified Trilogy® Liquid Standards

| Certified Standards | Liquid | | |
|---|---|---|---|
| Certified Trilogy® Liquid Standard Aflatoxin B1 | 10 µg/ml aflatoxin B1 in acetonitrile | 5 ml | CTSL-131-5 |
| Certified Trilogy® Liquid Standard Aflatoxin B2 | 10 µg/ml aflatoxin B2 in acetonitrile | 5 ml | CTSL-1012-5 |
| Certified Trilogy® Liquid Standard Aflatoxin G1 | 10 µg/ml aflatoxin G1 in acetonitrile | 5 ml | CTSL-1013-5 |
| Certified Trilogy® Liquid Standard Aflatoxin G2 | 10 µg/ml aflatoxin G2 in acetonitrile | 5 ml | CTSL-1014-5 |
| Certified Trilogy® Liquid Standard Deoxynivalenol | 25 µg/ml deoxynivalenol in methanol | 5 ml | CTSL-383-5 |
| Certified Trilogy® Liquid Standard Zearalenone | 10 µg/ml zearalenone in methanol | 5 ml | CTSL-422-5 |
| Certified Trilogy® Liquid Standard Ochratoxin A | 5 µg/ml ochratoxin A in methanol | 5 ml | CTSL-520-5 |

## Trilogy® Quality Control Material for mycotoxin analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **QC Material** | **Food or feed product** | | |
| Trilogy® QC Material Aflatoxin | Commodities and contamination levels available upon request | 100 g | TQC-A100 |
| Trilogy® QC Material Deoxynivalenol (DON) | Commodities and contamination levels available upon request | 100 g | TQC-D100 |
| Trilogy® QC Material Fumonisin | Commodities and contamination levels available upon request | 100 g | TQC-F100 |
| Trilogy® QC Material Ochratoxin | Commodities and contamination levels available upon request | 100 g | TQC-O100 |
| Trilogy® QC Material Zearalenone | Commodities and contamination levels available upon request | 100 g | TQC-Z100 |
| Trilogy® QC Material Multitoxin | Commodities, mycotoxins and contamination levels available upon request | 100 g | TQC-MT100 |
| Trilogy® QC Material Complex Commodities | Commodities, mycotoxins and contamination levels available upon request | 100 g | TQC-CC100 |

## Analytical Mycotoxin Standards

| Aflatoxins | Dried | | |
|---|---|---|---|
| Trilogy® Dried Standard Aflatoxins B1, B2, G1, G2 | Aflatoxins B1, B2, G1, G2 (4:1:4:1) (2/0.5/2/0.5 µg/ml) | 5 µg/ml in 10 ml after reconstitution | TS-108-10 |
| Trilogy® Dried Standard Aflatoxin B1 | Aflatoxin B1 | 25 µg/ml in 10 ml after reconstitution | TS-104-10 |
| Trilogy® Dried Standard Aflatoxin B2 | Aflatoxin B2 | 25 µg/ml in 10 ml after reconstitution | TS-105-10 |
| Trilogy® Dried Standard Aflatoxin G1 | Aflatoxin G1 | 25 µg/ml in 10 ml after reconstitution | TS-106-10 |
| Trilogy® Dried Standard Aflatoxin G2 | Aflatoxin G2 | 25 µg/ml in 10 ml after reconstitution | TS-107-10 |
| Trilogy® Dried Standard Aflatoxin M1 | Aflatoxin M1 | 1 µg/ml in 2 ml after reconstitution | TS-130-2 |
| | **Liquid** | | |
| Trilogy® Liquid Standard Aflatoxins B1, B2, G1, G2 | Aflatoxin B1, B2, G1, G2 (4:1:4:1) 5 µg/ml (2/0.5/2/0.5 µg/ml) in acetonitril | 10 ml | TSL-108-10 |
| AFLASTANDARD | Total aflatoxin standard (B1, B2, G1, G2) solution at 1000 ng/ml (250 ng/ml each) in methanol | 6 ml<br>3 ml | RBRP22<br>RBRP22A |
| Trilogy® Liquid Standard Aflatoxin B1 | Aflatoxin B1 25 µg/ml in acetonitrile | 10 ml | TSL-104-10 |
| Trilogy® Liquid Standard Aflatoxin B2 | Aflatoxin B2 25 µg/ml in acetonitrile | 10 ml | TSL-105-10 |
| Trilogy® Liquid Standard Aflatoxin G1 | Aflatoxin G1 25 µg/ml in acetonitrile | 10 ml | TSL-106-10 |
| Trilogy® Liquid Standard Aflatoxin G2 | Aflatoxin G2 25 µg/ml in acetonitrile | 10 ml | TSL-107-10 |
| Trilogy® Liquid Standard Aflatoxin M1 | Aflatoxin M1 0.5 µg/ml in acetonitrile | 2 ml | TSL-143-2 |
| M1 STANDARD | Aflatoxin M1 standard solution at a concentration of 1000 ng/ml in acetonitrile | 6 ml | RBRP42 |

# Mycotoxins

## Analytical Mycotoxin Standards

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Ochratoxin A** | **Dried** | | |
| Trilogy® Dried Standard Ochratoxin A | Ochratoxin A | 1 µg/ml in 5 ml after reconstitution | TS-503-5 |
| | **Liquid** | | |
| Trilogy® Liquid Standard Ochratoxin A | Ochratoxin A 10 µg/ml in methanol | 5 ml | TSL-504-5 |
| OCHRASTANDARD | Ochratoxin A standard solution at a concentration of 1000 ng/ml in methanol | 6 ml 3 ml | RBRP11 RBRP11A |
| **Zearalenone** | **Dried** | | |
| Trilogy® Dried Standard Zearalenone | Zearalenone | 25 µg/ml in 10 ml after reconstitution | TS-401-10 |
| | **Liquid** | | |
| Trilogy® Liquid Standard Zearalenone | Zearalenone 25 µg/ml in methanol | 10 ml | TSL-401-10 |
| ZEASTANDARD | Zearalenone standard solution at a concentration of 1000 ng/ml in acetonitrile | 3 ml | RBRP44A |
| **DAS** | **Dried** | | |
| Trilogy® Dried Standard Diacetoxyscirpenol (DAS) | Diacetoxyscirpenol (DAS) | 100 µg/ml in 5 ml after reconstitution | TS-316-5 |
| **DON (Vomitoxin)** | **Dried** | | |
| Trilogy® Dried Standard DON | Deoxynivalenol | 50 µg/ml in 10 ml after reconstitution | TS-310-10 |
| Trilogy® Dried Standard Deoxynivalenol (DON) | Deoxynivalenol (DON) | 100 µg/ml in 10 ml after reconstitution | TS-317-10 |
| Trilogy® Dried Standard 3-Acetyl Deoxynivalenol | 3-acetyl deoxynivalenol | 100 µg/ml in 5 ml after reconstitution | TS-342-5 |
| Trilogy® Dried Standard 15-Acetyl Deoxynivalenol | 15-acetyl deoxynivalenol | 100 µg/ml in 5 ml after reconstitution | TS-343-5 |
| | **Liquid** | | |
| Trilogy® Liquid Standard Deoxynivalenol (DON) | Deoxynivalenol (DON) 100 µg/ml in methanol | 10 ml | TSL-317-10 |
| **Fusarenon X** | **Dried** | | |
| Trilogy® Dried Standard Fusarenon X | Fusarenon X | 100 µg/ml in 5 ml after reconstitution | TS-351-5 |
| **Fumonisins** | **Dried** | | |
| Trilogy® Dried Standard Fumonisin B1, B2 | Fumonisin B1, Fumonisin B2 (10:3) | 100/30 µg/ml in 2 ml after reconstitution | TS-202-2 |
| | **Liquid** | | |
| Trilogy® Liquid Standard Fumonisin B1, B2 | Fumonisin B1, Fumonisin B2 (10:3) 100/30 µg/ml in acetonitrile/water (50/50) | 2 ml | TSL-202-2 |
| Trilogy® Liquid Standard Fumonisin B1 | Fumonisin B1 100 µg/ml in acetonitrile/water (50/50) | 2 ml | TSL-204-2 |
| Trilogy® Liquid Standard Fumonisin B2 | Fumonisin B2 100 µg/ml in acetonitrile/water (50/50) | 2 ml | TSL-205-2 |

## Analytical Mycotoxin Standards

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Neosolaniol** | **Dried** | | |
| Trilogy® Dried Standard Neosolaniol | Neosolaniol | 100 µg/ml in 5 ml after reconstitution | TS-328-5 |
| **Nivalenol** | **Dried** | | |
| Trilogy® Dried Standard Nivalenol | Nivalenol | 100 µg/ml in 5 ml after reconstitution | TS-344-5 |
| **T-2/HT-2** | **Dried** | | |
| Trilogy® Dried Standard T-2 Toxin | T-2 Toxin | 100 µg/ml in 5 ml after reconstitution | TS-314-5 |
| Trilogy® Dried Standard HT-2 Toxin | HT-2 Toxin | 100 µg/ml in 5 ml after reconstitution | TS-333-5 |
| **T-2/HT-2** | **Liquid** | | |
| Trilogy® Liquid Standard T-2 Toxin | T-2 Toxin 100 µg/ml in acenotrile | 5 ml | TSL-314-5 |
| Trilogy® Liquid Standard HT-2 Toxin | HT-2 Toxin 100 µg/ml in acenotrile | 5 ml | TSL-333-5 |
| **Trichothecenes – Multitoxines** | **Liquid** | | |
| Trilogy® Liquid Standard Type A & B Trichothecenes | Type A & B Trichothecenes (Fusarenon X, Deoxynivalenol, Nivalenol, 3- & 15-Acetyl DON, HT-2 Toxin, Diacetoxyscirpenol, T-2 Toxin,Neosolaniol) 100 µg/ml in acetonitrile | 2 ml | TSL-307-2 |
| | **Dried** | | |
| Trilogy® Dried Standard Type A Trichothecenes | Type A Trichothecenes (Diacetoxyscirpenol, HT-2 Toxin, T-2 Toxin, Neosolaniol) | 10 µg/ml in 5 ml after reconstitution | TS-353-5 |
| **Citrinin** | **Dried** | | |
| Trilogy® Dried Standard Citrinin | Citrinin | 5 µg/ml in 5 ml after reconstitution | TS-904-5 |
| **Patulin** | **Liquid** | | |
| Trilogy® Liquid Standard Patulin | Patulin 25 µg/ml in acetonitrile | 5 ml | TSL-601-5 |

# Analysis of hormone & anabolic residues in food

**Hormones and anabolics can be used as growth promoters in livestock breeding to enhance average daily weight gain and meat/fat ratio. As a consequence, hormone and anabolic residues can occur in food of animal origin.**

Due to their systemic function, hormonal residues in food bear a potential health risk for the consumer.

Additionally, the entry of hormonally active substances into surface and ground water can have an ecological impact on aquatic ecosystems.

Consequently, most countries have banned the use of hormones and anabolics in livestock breeding completely with exceptions for veterinary purposes.

## RIDASCREEN®/EuroProxima

- ELISAs for the most commonly used hormones and anabolics
- Quantitative Screening
- Applications for many matrices
- Evaluation with RIDASOFT® Win.NET (RIDASCREEN®) respectively dedicated software (EuroProxima)

# Hormones & anabolics

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **ß-Agonists** | **ELISA microtiter plates** | | |
| RIDASCREEN® ß-Agonists | Enzyme immunoassay for quantitative analysis of ß-agonists in urine (150 ng/L), serum (900 ng/L), meat (100 ng/kg), liver (130 ng/kg), milk (45 ng/L), feed (1000 ng/kg) | 96 determinations<br>Incubation time: 1 hr | R1704 |
| RIDASCREEN® Clenbuterol | Enzyme immunoassay for quantitative analysis of clenbuterol in milk (50 ng/L), meat (100 ng/kg), liver (150 ng/kg), kidney (200 ng/kg), urine (100 ng/L), plasma/serum (250 ng/L), hair (2 µg/kg), eye ball (200 ng/kg), feed (600 µg/kg) | 96 determinations<br>Incubation time: 45 min | R1711 |
| RIDA® Sample decolorant | Reagents for the sample preparation of liver and feed for RIDASCREEN® Clenbuterol (Art. No. R1711) | 1 Set (600 samples) | R1699 |
| RIDA® ß-Agonists & Clenbuterol Spiking Solution | 100 ng/ml | 1 ml | R1799 |
| Clenbuterol Assay Control (positive) | Freeze-dried calves urine positive for clenbuterol | 1 x 5 ml | R1707 |
| Clenbuterol Assay Control (negative) | Freeze-dried calves urine negative for clenbuterol | 1 x 2 ml | R1708 |
| RIDASCREEN® Ractopamin | Enzyme immunoassay for quantitative analysis of ractopamine in urine (600 ng/L), meat (200 ng/kg), liver (300 ng/kg), * | 96 determinations<br>Incubation time: 1 hr 30 min | R9901 |
| RIDA® Ractopamin Spiking Solution | 10 ng/ml | 1 ml | R9999 |
| **Stilbenes** | **ELISA microtiter plates** | | |
| EuroProxima Diethylstilbestrol (DES) | Enzyme immunoassay for quantitative analysis of DES in tissue (0.2 µg/kg), milk (0.5 µg/kg) and urine (0.2 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5081DES |
| EuroProxima Diethylstilbestrol (DES) Spiking Solution | 10 ng/ml | 1 ml | 5081DESSP |
| **Sex hormones** | **ELISA microtiter plates** | | |
| RIDASCREEN® 17ß-Östradiol | Enzyme immunoassay for quantitative analysis of 17 β-estradiol in bovine plasma (20 ng/L), * | 96 determinations<br>Incubation time: 2 hrs 30 min | R2301 |
| RIDA® 17ß-Östradiol Spiking Solution | 200 ng/ml | 1 ml | R2399 |
| RIDASCREEN® Testosteron | Enzyme immunoassay for quantitative analysis of testosterone in bovine plasma (20 ng/L), * | 96 determinations<br>Incubation time: 2 hrs 30 min | R2401 |
| RIDA® Testosteron Spiking Solution | 500 ng/ml | 1 ml | R2499 |
| **Gestagens** | **ELISA microtiter plates** | | |
| EuroProxima Medroxy Progesterone Acetate | Enzyme immunoassay for quantitative analysis of medroxyprogesteronacetat in bovine renal fat (0.5µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5131MPA |
| RIDASCREEN® Melengestrolacetat | Enzyme immunoassay for quantitative analysis of melengestrolacetate in bovine renal fat (300 ng/kg), meat (75 ng/kg) | 96 determinations<br>Incubation time: 2 hrs 30 min | R6502 |
| RIDA® Melengestrolacetat Spiking Solution | 100 ng/ml | 1 ml | R6599 |

* Further applications on request.

# Hormones & anabolics

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Anabolic steroids** | **ELISA microtiter plates** | | |
| EuroProxima Trenbolone | Enzyme immunoassay for quantitative analysis of trenbolone in urine (0.5 µg/kg), pork/beef (0.4 µg/kg) and liver (0.6 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5081TRENBO |
| EuroProxima Trenbolone Spiking Solution | 50 ng/ml | 1 ml | 5081TRENBO SP |
| RIDASCREEN® Methyltestosteron | Enzyme immunoassay for quantitative analysis of methyltestosterone in porcine urine (540 ng/L), bovine urine (750 ng/L), beef (450 ng/kg), pork (390 ng/kg), fish (430 ng/kg), porcine liver (180 ng/kg), bovine liver (720 ng/kg) | 96 determinations<br>Incubation time: 2 hrs 15 min | R3611 |
| RIDA® Methyltestosteron Spiking Solution | 100 ng/ml | 1 ml | R3699 |
| RIDASCREEN® 19-Nortestosteron | Enzyme immunoassay for quantitative analysis of 19-nortestosterone in urine (3 µg/L), * | 96 determinations<br>Incubation time: 1 hr 15 min | R2801 |
| RIDA® 19-Nortestosteron Spiking Solution | 1 µg/ml | 1 ml | R2899 |
| RIDASCREEN® Ethinylöstradiol | Enzyme immunoassay for quantitative analysis of ethinylestradiol in bovine/porcine urine (370 ng/L), beef (230 ng/kg), pork (200 ng/kg), bovine plasma (50 ng/L) | 96 determinations<br>Incubation time: 2 hrs 30 min | R2511 |
| RIDA® Ethinylöstradiol Spiking Solution | 20 ng/ml | 1 ml | R2599 |
| EuroProxima Progesterone | Enzyme immunoassay for quantitative analysis of Progesterone in milk (1 µg/kg) and serum (1 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5081PROG |
| EuroProxima Progesterone Spiking Solution | 100 ng/ml | 1 ml | 5081PROGSP1 |
| EuroProxima Stanozolol | Enzyme immunoassay for quantitative analysis of Stanozolol in urine (1 µg/kg) and faeces (1 µg/kg) | 96 determinations<br>Incubation time: 45 min | 5081STAN |
| **Corticosteroide** | **ELISA microtiter plates** | | |
| EuroProxima Corticosteroid | Enzyme immunoassay for quantitative analysis of Corticosteroids in milk (0.2 µg/kg), urine (3 µg/kg), muscle (0.2 µg/kg) and liver (1 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5081COR |
| EuroProxima Triamcinolone | Enzyme immunoassay for quantitative analysis of Triamcinolone in urine (0.1 µg/kg) | 96 determinations<br>Incubation time: 45 min | 5081TRIA |
| **Non-steroidal compounds** | **ELISA microtiter plates** | | |
| EuroProxima Zeranol | Enzyme immunoassay for quantitative analysis of zeranol in urine (0.2 µg/kg), pork/beef (0.7 µg/kg) and liver (1.3 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5081ZERAN |
| EuroProxima Zeranol Spiking Solution | 20 ng/ml | 1 ml | 5081ZERANSP |
| **Accessories** | **Solid phase columns** | | |
| RIDA® C18 columns | Solid phase extraction columns for use in conjunction with RIDASCREEN® ELISAs | 100 columns | R2002 |

* Further applications on request.

## Hormones & anabolics

| | Matrices | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Test system** | **Meat** | **Milk** | **Serum/ plasma** | **Urine** | **Liver** | **Perirenal fat** | **Faeces** | **Feed** | **Additional matrices** |
| RIDASCREEN® 17β-Östradiol | ● | ● | ● | ● | | | | | |
| RIDASCREEN® 19-Nortestosteron | ● | | | ● | | | | | |
| RIDASCREEN® β-Agonists | ● | ● | ● | ● | ● | | | ● | |
| RIDASCREEN® Clenbuterol | ● | ● | ● | ● | ● | ● | | ● | Hair, eye |
| EuroProxima Corticosteroid | ● | ● | | ● | ● | | | | |
| EuroProxima Diethylstilbestrol | ● | ● | | ● | | | | | |
| RIDASCREEN® Ethinylöstradiol | ● | | ● | ● | | | | | |
| RIDASCREEN® Melengestrolacetat | ● | | | | | ● | | | |
| RIDASCREEN® Methyltestosteron | ● | | | | ● | | | | Fish |
| EuroProxima Progesterone | | ● | ● | | | | | | |
| EuroProxima Medroxy Progesterone Acetate | | | | | | ● | | | Bovine |
| RIDASCREEN® Ractopamin | ● | | | ● | ● | | | ● | |
| RIDASCREEN® Testosteron | ● | | ● | ● | | | | | |
| EuroProxima Trenbolon | ● | | | ● | ● | | | | |
| EuroProxima Triamcinolone | | | | ● | | | | | |
| EuroProxima Stanozolol | | | | ● | | | ● | | |
| EuroProxima Zeranol | ● | | | ● | ● | | | | |

# Analysis of antibiotic residues

**In addition to their function as veterinary drugs, antibiotics can be used as antimicrobial growth promoters in livestock breeding. As a consequence of incorrect or illegal use, antibiotic drug residues in food of animal origin can remain.**

Because of the potentially toxic, carcinogenic and allergic properties of antibiotic residues, contaminated food is a direct health risk for consumers. Additionally, the inappropriate use of antibiotics in animal husbandry and food production can promote multi-resistant pathogens, which pose an increasing risk for public health.

For these reasons, most countries have established Maximum Residue Limits (MRLs) and monitoring programs for antibiotic residues in food. Non-compliance with these legislations e.g. in export can lead to severe penalties.

For food industries, antibiotic residues additionally bear technological and economic risks, as they can inhibit production processes involving microorganisms and thus lead to production losses.


## RIDASCREEN®/EuroProxima

ELISAs for the screening of antibiotic residues

- Quantitative results of single antibiotics or antibiotic groups
- Detect the most commonly used antibiotics
- Applications for a wide range of matrices
- Evaluation with RIDASOFT® Win.NET (RIDASCREEN®) respectively dedicated software (EuroProxima)

## Premi®Test

Microbial inhibition test for qualitative screening

- Detects a broad spectrum of antibiotics
- Easy to handle, no sophisticated equipment needed
- Fast (-er than plate tests)
- Sensitive (in conformity with EU-MRLs)
- Validated (AOAC-RI PTM$^{SM}$ and AFNOR NF VALIDATION)

# Antibiotics

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Fenicols** | **ELISA microtiter plates** | | |
| RIDASCREEN® Chloramphenicol | Enzyme immunoassay for quantitative analysis of chloramphenicol in milk (24 ng/L), milk powder (24 ng/kg), yoghurt/kefir/buttermilk/cream (12 ng/kg), curd/sour cream (15 ng/kg), butter (61 ng/kg), cheese (16 ng/kg), honey (25 ng/kg), royal jelly (23 ng/kg), meat (5 ng/kg), fish/shrimp (8 ng/kg), egg (15 ng/kg), urine (196 ng/L), plasma/serum (18 ng/L), feed (107 ng/kg) | 96 determinations<br>Incubation time: 45 min | R1511 |
| RIDA® Chloramphenicol Spiking Solution | 50 ng/ml | 1 ml | R1599 |
| EuroProxima Florfenicol-amine | Enzyme immunoassay for quantitative analysis of florfenicol-amine in tissue (5 µg/kg), fish (8 µg/kg), kidney (11 µg/kg), liver (7 µg/kg), milk (2 µg/L) and egg (5 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5091FLOA |
| **Tetracyclin** | **ELISA microtiter plates** | | |
| RIDASCREEN® Tetracyclin | Enzyme immunoassay for quantitative analysis of tetracycline in milk (0.9 µg/L), milk powder (5 µg/kg), cheese (2.3 µg/kg), butter (2.6 µg/kg), dairy products (1 µg/kg), honey (3.7 µg/kg), meat (1.5 µg/kg), sausage (4.6 µg/kg), fish (1.5 µg/kg), shrimp (1.2 µg/kg), eggs (2.8 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | R3505 |
| RIDA® Tetracyclin Spiking Solution | Lyophilisate, produces 10 ml of a 100 ng/ml stock solution | 1 lyophilisate,<br>1 reconstitution buffer | R3599 |
| EuroProxima Oxytetracycline | Enzyme immunoassay for quantitative analysis of Oxytetracycline in honey (5 µg/kg) and shrimp/fish (2 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5091OTC |
| **ß-Lactame** | **ELISA microtiter plates** | | |
| EuroProxima Penicillin | Enzyme immunoassay for quantitative analysis of penicillins in milk (0.08 µg/L), milkpowder (1.52 µg/kg), cheese/butter/ yoghurt/curd/cream/kefir/ whey (0.4 - 2.5 µg/L), infant formula (0.5 µg/L), chicken meat (5 µg/kg), salmon (2.03 µg/kg), Shrimps (5.00 µg/kg) and turkey meat (0.9 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5091PEN |
| **Nitrofurans** | **ELISA microtiter plates** | | |
| RIDASCREEN® Nitrofuran (AOZ) | Enzyme immunoassay for quantitative analysis of AOZ in shrimp/meat/liver/fish/whole egg (50 ng/kg), * | 96 determinations<br>Incubation time: 1 hr 15 min | R3703 |
| RIDA® Nitrofuran (AOZ) Spiking Solution | 20 ng/ml | 1 ml | R3798 |
| RIDASCREEN® Nitrofuran (AMOZ) | Enzyme immunoassay for quantitative analysis of AMOZ in beef (40 ng/kg), pork (65 ng/kg), poultry (40 ng/kg), fish (40 ng/kg), shrimp (30 ng/kg), * | 96 determinations<br>Incubation time: 45 min | R3722 |
| RIDA® Nitrofuran (AMOZ) Spiking Solution | 20 ng/ml | 1 ml | R3799 |
| RIDASCREEN® Nitrofuran (AHD) | Enzyme immunoassay for quantitative analysis of AHD in shrimp (200 ng/kg), fish (76 ng/kg), * | 96 determinations<br>Incubation time: 1 hr 15 min | R3713 |
| RIDA® Nitrofuran (AHD) Spiking Solution | 20 ng/ml | 1 ml | R3796 |
| RIDASCREEN® Nitrofuran (SEM) | Enzyme immunoassay for quantitative analysis of SEM in meat beef/pork/shrimp (300 ng/kg), poultry (400 ng/kg), fish 360 ng/kg), * | 96 determinations<br>Incubation time: 1 hr 15 min | R3715 |
| RIDA® Nitrofuran (SEM) Spiking Solution | 20 ng/ml | 1 ml | R3797 |

* Further applications on request.

# Antibiotics

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Aminoglycosides** | **ELISA microtiter plates** | | |
| RIDASCREEN® Streptomycin | Enzyme immunoassay for quantitative analysis of streptomycin in milk (5 µg/L), honey (2 µg/kg), beef/pork (22 µg/kg), poultry (28 µg/kg), liver (23 (µg/kg), kidney (18 µg/kg), shrimp (20 µg/kg), apple juice (4 µg/L) | 96 determinations<br>Incubation time: 45 min | R3104 |
| RIDA® Streptomycin Spiking Solution | 10 µg/ml | 1 ml | R3199 |
| EuroProxima Gentamicin | Enzyme immunoassay for quantitative analysis of Gentamicin in milk (2 µg/kg), tissue (10 µg/kg), honey (2.5 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1 hr 30 min | 5111GEN |
| EuroProxima Neomycin | Enzyme immunoassay for quantitative analysis of Neomycin in milk (6 µg/kg), tissue (31 µg/kg), urine (8 µg/kg), honey (16 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1 hr 30 min | 5111NEO |
| **Macrolides** | **ELISA microtiter plates** | | |
| EuroProxima Erythromycin | Enzyme immunoassay for quantitative analysis of Erythromycin in milk (4 µg/kg), honey (10 µg/kg), egg (10 µg/kg), shrimp/fish (10 µg/kg), liver (10 µg/kg) and urine (4 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5151ERY |
| EuroProxima Tylosin | Enzyme immunoassay for quantitative analysis of Tylosin in milk (2.5 µg/kg), honey (2.5 µg/kg), egg (2.5 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1 hr 15 min | 5151TYL |
| **Lincomycine** | **ELISA microtiter plates** | | |
| EuroProxima Lincomycin | Enzyme immunoassay for quantitative analysis of Lincomycin in milk (45 µg/kg), tissue (41 µg/kg), honey (7 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1 hr 30 min | 5151LIN |
| **Virginiamycin** | **ELISA microtiter plates** | | |
| EuroProxima Virginiamycin | Enzyme immunoassay for quantitative analysis of Virginiamycin in urine (40 µg/kg), feed (40 µg/kg) and milk (8 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5151VIG |
| **Sulfonamides** | **ELISA microtiter plates** | | |
| RIDASCREEN® Sulfamethazin | Enzyme immunoassay for quantitative analysis of sulfamethazine in milk (4 µg/L), meat (5 µg/kg), liver (6 µg/kg), kidney (10 µg/kg), honey (10 µg/kg),* | 96 determinations<br>Incubation time: 45 min | R3011 |
| RIDA® Sulfamethazin Spiking Solution | 10 µg/ml | 1 ml | R3098 |
| RIDASCREEN® Sulfonamide | Enzyme immunoassay for quantitative analysis of sulfonamides in poultry/egg (1.5 µg/kg), pork/fish/shrimp/honey (2 µg/kg), milk (3.5 µg/L) | 96 determinations<br>Incubation time: 1 hr 15 min | R3004 |
| RIDA® Sulfonamide/Sulfamethoxypyridazin Spiking Solution | 0.1 µg/ml | 1 ml | R3099 |

* Further applications on request.

# Antibiotics

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Quinolones/Fluoroquinolones** | **ELISA microtiter plates** | | |
| RIDASCREEN® Chinolone/Quinolones | Enzyme immunoassay for quantitative analysis of quinolones in shrimp (6 µg/kg), fish (8 µg/kg), egg (9 µg/kg), meat (10 µg/kg), * | 96 determinations<br>Incubation time: 1 hr 15 min | R3113 |
| RIDA® Ciprofloxacin Spiking Solution | 1 µg/ml | 1 ml | R3198 |
| EuroProxima Flumequine | Enzyme immunoassay for quantitative analysis of Flumequine in milk (13 µg/kg), egg (3 µg/kg), honey (10 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1hr 30 min | 5101FLUM |
| EuroProxima Fluoroquinolones | Enzyme immunoassay for quantitative analysis of Fluoroquinolones in milk (3 µg/kg), egg (6 µg/kg), honey (2 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1hr 30 min | 5101FLUQG |
| EuroProxima Fluoroquinolones II | Enzyme immunoassay for quantitative analysis of Fluoroquinolones in shrimp (4 µg/kg), tissue (0.6 µg/kg), honey (0.1 µg/kg) and other matrices | 96 determinations<br>Incubation time: 45 min | 5101FLUQII |
| **Nitromidazoles** | **ELISA microtiter plates** | | |
| EuroProxima Dimetridazole | Enzyme immunoassay for quantitative analysis of Dimetridazole in shrimps (0.8 µg/kg), tissue (0.3 µg/kg), milk (0.3 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1 hr 30 min | 5091DIME |
| **Polypeptides** | **ELISA microtiter plates** | | |
| RIDASCREEN® Bacitracin | Enzyme immunoassay for quantitative analysis of bacitracin in milk (11 µg/L), meat (9 µg/kg), eggs (11 µg/kg), feed (82 µg/kg), urine (23 µg/L) and fish (15 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | R2901 |
| Europroxima Bacitracin Spiking Solution | 1000 ng/ml | 1 ml | 5151BACSP |
| **Others** | **ELISA microtiter plates** | | |
| EuroProxima Colistin | Enzyme immunoassay for quantitative analysis of Colistin in milk (4 µg/kg), egg (22 µg/kg), chicken tissue (12 µg/kg) and other matrices | 96 determinations<br>Incubation time: 1 hr | 5151COL |
| **Premi®Test** | **Test ampoules** | | |
| Premi®Test | Microbial inhibition test for the screening of antibiotic residues in food of animal origin such as meat (beef, pork, poultry), liver, kidney, fish, shrimp, eggs, bovine/porcine urine and pork/poultry feed<br>Detectable antibiotic groups: ß-lactams, cephalosporins, macrolides, tetracyclins, sulphonamides, aminoglycosides, quinolones, polypeptides, fenicols, others | 4 x 25 ampoules<br>25 ampoules<br>Incubation time: ~ 3 hrs | R3900<br>R3925 |

* Further applications on request.

# Antibiotics

| Test | Matrix | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Milk | Milk powder | Dairy products* | Meat | Liver | Kidney | Fish | Shrimp | Honey | Egg | Urine | Serum/plasma | Feed | Additional matrices |
| RIDASCREEN® Bacitracin | ● | | | ● | | | | | | | ● | | | |
| RIDASCREEN® Chinolone | ● | | | ● | | | ● | ● | ● | | | | | |
| RIDASCREEN® Chloramphenicol | ● | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | |
| EuroProxima Colistin | ● | | | ● | ● | | | | | ● | | | ● | |
| EuroProxima Dimetridazole | ● | | | ● | | | | ● | | ● | | ● | | |
| EuroProxima Erythromycin | ● | | | ● | ● | | | ● | ● | ● | ● | | | |
| EuroProxima Florfenicol-amine | ● | | | ● | ● | ● | ● | | | ● | | | | |
| EuroProxima Flumequine | ● | | | ● | | | | ● | ● | ● | ● | ● | ● | |
| EuroProxima Fluorquinolones | ● | | | ● | | | | | ● | ● | ● | ● | ● | |
| EuroProxima Fluorquinolones II | | | | ● | | | | ● | ● | | ● | ● | ● | |
| EuroProxima Gentamicin | ● | | | ● | | | | | ● | ● | ● | ● | ● | |
| EuroProxima Lincomycin | ● | | | ● | ● | | | | ● | ● | | | | |
| EuroProxima Neomycin | ● | | | ● | | | | | ● | | ● | ● | | |
| RIDASCREEN® Nitrofuran AHD | | | | | | | ● | ● | | | | | | |
| RIDASCREEN® Nitrofuran AMOZ | | | | ● | ● | | ● | ● | | | | | | |
| RIDASCREEN® Nitrofuran AOZ | ● | | | ● | ● | | ● | ● | ● | ● | | | | |
| RIDASCREEN® Nitrofuran SEM | | | | ● | | | ● | ● | | | | | | |
| EuroProxima Oxytetracycline | | | | | | | | ● | ● | | | | | |
| EuroProxima Penicillin | ● | ● | ● | ● | | | ● | ● | | | | | | baby food |
| Premi®Test | | | | ● | ● | ● | ● | ● | | | | | | |
| RIDASCREEN® Sulfamethazin | ● | | | ● | ● | ● | ● | ● | ● | ● | | | | |
| RIDASCREEN® Sulfonamide | ● | | | ● | | | | | | | | | | |
| RIDASCREEN® Streptomycin | ● | | ● | ● | ● | ● | | | ● | ● | | | | Apple juice |
| RIDASCREEN® Tetracyclin | ● | ● | ● | ● | | | ● | ● | ● | ● | | | | Sausage |
| EuroProxima Tylosin | ● | | | ● | | | | | ● | ● | ● | ● | ● | |
| EuroProxima Virginiamycin | ● | | | | | | | | | | ● | ● | | |

* Dairy products: butter, cheese, curd, yoghurt, cream, kefir (depending on test).

## Other veterinary drug residues/miscellaneous

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Malachite Green** | **ELISA microtiter plates** | | |
| EuroProxima Malachite Green Total | Enzyme immunoassay for quantitative analysis of malachite green, leucomalachite green, crystal violet and leucocrystal violet in shrimps and fish (0.12 µg/kg) | 96 determinations<br>Incubation time: 45 min | 5161MGT |
| **Anthelmintics** | **ELISA microtiter plates** | | |
| EuroProxima Ivermectin | Enzyme immunoassay for quantitative analysis of Ivermectin in milk (2.5 µg/kg), corned beef (5 µg/kg), liver (8 µg/kg), serum (1 µg/kg), urine (1 µg/kg) and tissue (3 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5141IVER |
| EuroProxima Moxidectin | Enzyme immunoassay for quantitative analysis of Moxidectin in urine (2 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5141MOXI |
| **Tranquilizers** | **ELISA microtiter plates** | | |
| EuroProxima Azaperone-Azaperol | Enzyme immunoassay for quantitative analysis of Azaperone-Azaperol in urine (0.2 µg/kg), tissue (3 µg/kg), liver (5 µg/kg) and kidney (10 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5201AZA |
| EuroProxima Carazolol | Enzyme immunoassay for quantitative analysis of Carazolol in urine (2 µg/kg), tissue (0.3 µg/kg) and liver/kidney (3 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5201CARA |
| EuroProxima Promazine, generic | Enzyme immunoassay for quantitative analysis of Promazine in urine (1 µg/kg), tissue (4 µg/kg), liver (0.2 µg/kg) and kidney (0.3 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5201PROM |
| **Endocrine disruptors** | **ELISA microtiter plates** | | |
| EuroProxima Bisphenol A | Enzyme immunoassay for quantitative analysis of Bisphenol A in milk (0.4 µg/kg) and surface water (0.009 µg/kg) | 96 determinations<br>Incubation time: 1 hr 30 min | 5221BPA |

## Marine biotoxins

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| EuroProxima Domoic Acid | Enzyme immunoassay for quantitative analysis of Domoic Acid in scallop (60 µg/kg), mussel (60 µg/kg) and oyster (150 µg/kg) | 96 determinations<br>Incubation time: 45min | 5191DOMO |
| EuroProxima Okadaic Acid | Enzyme immunoassay for quantitative analysis of Okadaic Acid in mussel (40 µg/kg) and oyster (40 µg/kg) | 96 determinations<br>Incubation time: 45 min | 5191OKA |
| EuroProxima Saxitoxin | Enzyme immunoassay for quantitative analysis of Saxitoxin in mussel (4 µg/kg) and oyster (3 µg/kg) | 96 determinations<br>Incubation time: 45 min | 5191SAXI |
| EuroProxima Tetrodotoxin | Enzyme immunoassay for quantitative analysis of Tetrodotoxin in fish (7 µg/kg) and shellfish (9 µg/kg) | 96 determinations<br>Incubation time: 1 hr | 5191TTX |

## Food adulteration

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| EuroProxima Bovine Rennet Whey | Enzyme immunoassay for quantitative analysis of bovine rennet whey in bovine milk or milk powder | 96 determinations<br>Incubation time: 1 hr 30 min | 5171BRW |
| EuroProxima Milk Fraud/Bovine ELISA | Enzyme immunoassay for quantitative analysis of bovine milk in milk of other species at a minimal level of 0.5 % | 96 determinations<br>Incubation time: 1 hr 30 min | 5171BKCM |
| EuroProxima Cheese Fraud | Enzyme immunoassay for quantitative analysis of bovine milk in cheeses of other species at a minimum level of 1 % | 96 determinations<br>Incubation time: 1 hr 30 min | 5171BKCC |
| EuroProxima Lactoferrin | Enzyme immunoassay for quantitative analysis of lactoferrin in milk, milk powder and baby/infant milk powder | 96 determinations<br>Incubation time: 1 hr 30 min | 5091LFER |
| EuroProxima Lactoferrin Fast | Enzyme immunoassay for quantitative analysis of lactoferrin in baby/infant milk powder (103 mg/kg) | 96 determinations<br>Incubation time: 45 min | 5091LFERF |
| | **Test strips** | | |
| RIDA®QUICK CIS | Immunochromatographic test for the detection of cow milk (bovine IgG) in milk or cheese of other species; Detection limit: 0.5 % (cow milk in sheep/goat milk/cheese) | 25 strips<br>Incubation time: 5 min | R4303 |
| DUROTEST® S | Membrane strips for detection of non-durum wheat adulteration in semolina<br>Detection limit: 3 % non-durum wheat | 20 strips<br>(80 determinations) | RBRP10 |

## Histamine

| | | | |
|---|---|---|---|
| | **Enzymatic test microtiter plates** | | |
| RIDASCREEN® Histamine (enzymatic)<br>AOAC-RI 031901 | Enzymatic test in microtiter plate format for the quantitative determination of histamine in fish, canned fish, fish meal, wine, cheese and milk; for the sample preparation of wine it is recommended to use RIDA® Sample Decolorant (R1699)<br>Detection limit: 0.75 - 3.75 mg/kg (ppm) histamine (matrix dependend) | 96 determinations<br>Incubation time: 15 min | R1605 |
| | **Accessories** | | |
| RIDA® Sample decolorant | Reagents for the sample extraction of wine for histamine analysis using RIDASCREEN® Histamine (enzymatic) | 1 Set (200 wine samples) | R1699 |
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Histamin | Competitive ELISA to quantify histamine in food<br>Detection limit: 0.1 - 100 mg/kg histamine (matrix dependend) | 96 determinations<br>Incubation time: 1 hr 15 min | R1601 |

# Allergen analysis of food and surfaces with sensitive test kits

**Even small traces of allergenic proteins in food can provoke allergic reactions in sensitive people. Therefore monitoring of cross-contamination in raw material and production lines as well as correct labeling of food products are an important part of quality control in the food industry.**

### Surface and hygiene control

Clean and controlled allergen production conditions are a prerequisite for allergen-free food products. Therefore, swabs within production sites should be carried out regularly with test strips from bioavid or RIDA®QUICK. The RIDA®QUICK Gliadin has received validation according to AOAC-OMA ("Official Methods of Analysis") for the analysis of corn products and AOAC-PTM (*Performance Tested Methods*℠) for surfaces and cleansing waters. No lab equipment is required and results from these rapid tests are available within 5 - 10 minutes.

### Product testing

For food testing, different analytical methods exist: ELISA, LFD and PCR. While ELISA and LFD detect proteins, PCR detects the DNA of allergens. These methods are complementary and can be used for confirmation of screening results. The unique 4Plex Allergen qPCR kits allow the detection of 3 parameters plus internal amplification control in one run. Many of the ELISA kits are next to manually use also suitable for automation.

## bioavid/RIDA®QUICK

- On-site testing (swab test, CIP, food)
- Simple
- No lab equipment required
- Rapid qualitative decision
- Suitable for food after own validation

## RIDASCREEN® ELISA

- Quantitative results using certified calibration material (e.g. NIST; CRM)
- Simple sample preparation (20 min) and test procedure (3 x 10 min)
- Possibility of using automates (ThunderBolt®, GEMINI)
- Evaluation with the user-friendly software – RIDASOFT® Win.NET

## SureFood® PCR

- Robust, stable target molecule (DNA) in highly processed food samples
- Highly specific assay with minimum tendency to cross-reactions
- One sample preparation using SureFood® PREP Advanced (S1053) for all parameters in 90 minutes
- Customized solutions
- Standardized handling and test procedure (1 - 2 hours)

Allergens

## Gliadin/Gluten

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Gliadin<br>AOAC-OMA 2012.01 "Final Action"<br>AOAC-RI 120601<br>AACCI 38-50.01<br>Codex Alimentarius<br>Method (Type I)<br>ICC | Official R5 Mendez method: sandwich ELISA to quantify prolamines from wheat, rye and barley in e.g. food declared as gluten-free; sample extraction with R7006 or R7016 (not contained in the kit); the kit is suitable for automation<br>Detection limit: 0.5 mg/kg gliadin (0.1 - 1.2 matrix dependend) resp. 1.0 mg/kg gluten | 96 determinations<br>Incubation time: 1 hr 30 min | R7001 |
| RIDASCREEN®FAST Gliadin | R5 sandwich ELISA to quantify prolamines from wheat, rye, barley in e.g. food declared as gluten-free; sample extraction with R7006/R7016 or R7080 (not contained in the kit); the kit is suitable for automation<br>Detection limit: 0.5 mg/kg gliadin (0.14 - 2.10 matrix dependend) resp. 1.0 mg/kg gluten | 48 determination<br>Incubation time: 30 min | R7002 |
| RIDASCREEN®FAST Gliadin sensitive | R5 sandwich ELISA to quantify prolamines from wheat, rye and barley. For example, in food declared as gluten-free; sample extraction with Cocktail (patented) R7006/R7016 or R7080 (not contained in the kit); the kit is suitable for automation<br>Detection limit: 0.2 mg/kg Gliadin (0.19 - 2.10 matrix dependend) resp. 0.4 mg/kg Gluten | 96 determinations<br>Incubation time: 30 min | R7051 |
| RIDASCREEN® Gliadin competitive (2nd generation)<br>AOAC-OMA 2105.05 „Final Action"<br>AACCI 38-55.01 | R5 competitive ELISA to quantify potential toxic peptide sequences of prolamines from wheat, rye and barley in fermented and hydrolyzed food (e.g. beer, starch, starch syrup, malt extracts); sample preparation with an ethanolic solution; the standard material is a hydrolyzate (mixture of wheat, rye and barley); the results can be related to the limit values of the Codex Alimentarius;<br>Detection limit: 2.3 mg/kg gliadin (1.9 - 2.6 matrix dependend) resp. 4.6 mg/kg gluten | 96 determinations<br>Incubation time: 40 min | R7021 |
| RIDASCREEN® Total Gluten<br>AOAC-OMA 2018.15 "First Action" | R5 based sandwich ELISA for quantification of wheat, rye and barley gluten in oat and oats products; sample extraction with R7006 or R7016 (not contained in the kit)<br>Detection limit: 4 mg/kg gluten (matrix dependend) | 96 determinations<br>Incubation time: 50 min | R7041 |
| | **ELISA – accessories** | | |
| Cocktail (patented) | Developed by Prof. Mendez; officially recommended extraction buffer for all processed e.g. heat treated food samples in conjunction with R7001, R7002, R7003, R7004, R7051, R7041 | 105 ml | R7006 |
| Cocktail (patented) | Corresponding to R7006 but larger bottle size | 1000 ml | R7016 |
| RIDA® Cocktail ECO | Alternative to the Cocktail (patented) (use only after extraction comparision with the Cocktail): the extraction is faster (35 min) and more environment-friendly; for all processed e.g. heat treated food tested with R7001, R7002, R7003, R7004, R7051 | 2 x 115 ml | R7080 |
| RIDA® Extraction solution (colorless) | Alternative to the Cocktail (patented) (use only after extraction comparision with the Cocktail): the extraction is faster (35 min); for all processed e.g. heat treated food tested with R7001, R7002, R7003, R7004, R7051 | 105 ml | R7098 |
| Set of 3 processed Gliadin Assay Controls | Three assay controls: one negative, two positive homogenized snack samples;<br>in cooperation with Trilogy® Analytical Laboratories | 3 x 1.5 g | R7012 |

## Gluten

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Lateral flow test strips** | | |
| RIDA®QUICK Gliadin<br>AOAC-OMA 2015.16 „Final Action“<br>AACCI 38-60.01<br>AOAC-RI 101702 | The immunochromatographic test is based on the R5 antibody and detects prolamines from wheat, rye and barley; the test strips can be used directly for swabs on surfaces or for analysis of e.g. gluten-free raw materials<br>Detection limit: 1.6 - 3.0 µg gluten/100 cm² on surfaces, 4.4 mg/kg gluten in raw materials, 6.3 mg/kg gluten in processed food, cleaning/process water (without cleaner) 10 ng/ml gluten, (with cleaner) 50 - 100 ng/ml gluten | 25 test strips in reclosable tube,<br>25 plastic pipettes, sample diluent (ready-to-use),<br>30 vials<br>Incubation time: 5 min | R7003 |
| RIDA®QUICK Gliadin<br>(single packaged)<br>AOAC-OMA 2015.16 „Final Action“<br>AACCI 38-60.01<br>AOAC-RI 101702 | Corresponding to R7003, test strips are single packaged and no plastic pipettes are included | 25 test strips single packaged, sample diluent (ready-to-use), 30 vials | R7004 |
| RIDA®QUICK Gliadin (ready to swab)<br>AOAC-RI 101702 | Corresponding to R7003, test strips are single packaged, prefilled vials with ready-to-use sample buffer are included | 25 test strips single packed, 25 prefilled vials with ready-to-use buffer | R7005 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Gluten | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3606 |

* SureFood® QUANTARD Allergen 40 must be used for quantification.

# Allergens

## Soya

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Soya | Sandwich ELISA to quantify traces of soy protein in native and processed food; the kit is suitable for automation<br>Detection limit: 0.24 mg/kg (0.15 - 0.32 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R7102 |
| | **ELISA – accessories** | | |
| Set of 3 processed Soya Assay Controls | Three assay controls: one negative, two positive homogenized snack samples<br>In cooperation with Trilogy® Analytical Laboratories | 3 x 2 g | R7132 |
| | **Reference material** | | |
| MoniQA Reference Material - Blank (coming soon) | Milled cookie; free from gluten, soya, milk, egg, peanut, tree-nuts; negative control and/or matrix material as basis for spiked samples<br>Prepared and packaged by Trilogy Analytical Laboratories | 1 x 5 g | MQA 082015 |
| MoniQA Soya Reference Material (coming soon) | Soya powder can be used as a positive control or as a spike material<br>Prepared and packaged by Trilogy Analytical Laboratories | 1 x 5 g | MQA 712018 |
| | **Lateral flow test strips** | | |
| RIDA®QUICK Soya | Immunochromatographic test for the qualitative detection of soya (native and processed) contamination on surfaces and in food. For sample preparation, RIDA QUICK Soya accessory pack (Z7103) is recommended. For sample preparation from foods, the Soya extraction buffer (R7113) should be used.<br>Detection limit: on surfaces approx. 0.5 µg soya protein/ 100 cm², soya flour in wheat flour approx. 0.5mg/kg soya protein, in processed foods approx. 10 mg/kg soya protein (matrix dependend). | 25 dip sticks in reclosable tube, conjugate, extraction buffer, 30 plastic tubes, 25 tubes, 26 swabs, 50 pipette tips<br>Incubation time: 10 min | R7103 |
| | **RIDA®QUICK Soya – accessories** | | |
| RIDA®QUICK Soya accessory pack | Accessories for the use of the RIDA®QUICK Soya | Test tube holder, floating rack, pipette | Z7103 |
| RIDA®QUICK Soya Extraction buffer | The buffer is used for food sample preparation in conjunction with RIDA®QUICK Soya | 2 x 100 ml | R7113 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Soya | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3601 |

* SureFood® QUANTARD Allergen 40 must be used for quantification.

## Milk

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Milk<br>AOAC-RI 101501 | Sandwich ELISA to quantify traces of milk proteins (casein and ß-lactoglobulin) in food; the assay is calibrated to NIST SRM 1549a whole milk powder; the kit is suitable for automation<br>Detection limit: 0.7 mg/kg milk protein<br>(0.3 - 0.8 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R4652 |
| RIDASCREEN®FAST Casein | Sandwich ELISA to quantify traces of casein in food;<br>the kit is suitable for automation<br>Detection limit: extraction with Allergen extraction buffer for red wine, chocolate and ice tea powder 0.12 mg/kg casein (0.07 - 0.19 matrix dependend); extraction with Extractor 2 for teff flour, biscuits and rice waffles 0.71 mg/kg casein (0.41 - 0.95 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R4612 |
| RIDASCREEN®FAST ß-Lactoglobulin | Sandwich ELISA to quantify traces of native and processed ß-lactoglobulin in food;<br>the kit is suitable for automation<br>Detection limit: 0.042 mg/kg β-Lactoglobulin<br>(0.024 - 0.073 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R4912 |
| RIDASCREEN® ß-Lactoglobulin | Competitive ELISA to quantify processed ß-lactoglobulin in hydrolyzed milk products (e.g. hypoallergenic baby food)<br>Detection limit: 1.4 mg/kg ß-lactoglobulin<br>(0.9 - 2.1 matrix dependend) | 96 determinations<br>Incubation time: 2 hrs 45 min | R4901 |
| | **ELISA – accessories** | | |
| RIDA® Extractor 2 | The RIDA® Extractor 2 (R4613) is used for the sample preparation in<br>• RIDASCREEN®FAST Milk (R4652)<br>• RIDASCREEN®FAST Casein (R4612)<br>• RIDASCREEN®FAST ß-Lactoglobulin (R4912) | 30 ml concentrate,<br>sufficient for 15 samples | R4613 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Milch/Milk | Immunochromatographic tests for qualitative detection of milk proteins (casein and ß-Lactoglobulin)<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 9 min | BL613-10<br>BL613-25 |
| | **Reference material** | | |
| MoniQA Milk Reference Material – Blank | Milled cookie; free from gluten, milk, egg, soy, peanut, tree-nuts; can be used as negative control and/or matrix material as basis for spiked samples<br>Prepared and packaged by Trilogy Analytical Laboratories | 1 x 5 g | MQA 082015 |
| MoniQA Milk Reference Material – SMP | Skim milk powder; can be used as a positive control or as a spike material<br>Prepared and packaged by Trilogy Analytical Laboratories | 1 x 5 g | MQA 092014 |
| MoniQA Milk Reference Material – Low | Skim milk powder incurred in gluten free cookies (milled)<br>Prepared and packaged by Trilogy Analytical Laboratories | 1 x 5 g | MQA 102016 |
| MoniQA Milk Reference Material – High | Skim milk powder incurred in gluten free cookies (milled)<br>Prepared and packaged by Trilogy Analytical Laboratories | 1 x 5 g | MQA 082016 |
| Set of 4 MoniQA Reference controls – Blank, SMP, High, Low | Set includes pouch of<br>MQA 082015, MQA 092014, MQA 102016, MQA 082016<br>Prepared and packaged by Trilogy Analytical Laboratories | 4 x 5 g | MQA 122016 |

# Allergens

## Egg

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Egg | Sandwich ELISA to quantify traces of native and processed egg in food; the assay is calibrated to NIST SRM 8445 whole egg powder<br>Detection limit: 0.13 mg/kg whole egg powder (0.04 - 0.27 matrix dependend) | 96 determinations<br>Incubation time: 50 min | R6411 |
| RIDASCREEN®FAST Ei/Egg Protein | Sandwich ELISA to quantify traces of native egg in food; the assay is calibrated to NIST SRM 8445 whole egg powder; the kit is suitable for automation<br>Detection limit: 0.1 mg/kg whole egg powder (0.05 - 0.16 matrix dependend), 0.03 mg/kg egg white protein | 48 determinations<br>Incubation time: 30 min | R6402 |
| RIDASCREEN®FAST Lysozym | Sandwich ELISA to quantify traces of lysozyme in wine, cheese and sausage; the kit is suitable for automation<br>Detection limit: 0.005 mg/kg lysozyme in wine, 0.011 mg/kg lysozyme in cheese and sausages | 48 determinations<br>Incubation time: 30 min | R6452 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Ei/Egg | Immunochromatographic tests for qualitative detection of egg<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 8 min | BL608-10<br>BL608-25 |

## Nuts and similar

| | | | |
|---|---|---|---|
| **Almond** | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Mandel/Almond | Sandwich ELISA to quantify traces of almond in food; the kit is suitable for automation<br>Detection limit: 0.1 mg/kg almond (0 - 0.2 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R6901 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Almond | Immunochromatographic tests for qualitative detection of almond<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL601-10<br>BL601-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Almond | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3604 |
| **Brazil nut** | **Lateral flow test strips** | | |
| bioavid Lateral Flow Brazil nut | Immunochromatographic tests for qualitative detection of brazil nut<br>Detection limit: 1 mg/kg (matrix dependend) | 25 test strips<br>Total assay time: 10 min | BL602-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Brazil nut | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3617 |
| **Cashew kernel** | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Cashew | Sandwich ELISA to quantify traces of cashew in food;<br>Detection limit: 0.13 mg/kg cashew (0.10 - 0.19 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R6872 |

* SureFood® QUANTARD Allergen 40 must be used for quantification.

Allergens

## Nuts and similar

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Cashew Kernel | Immunochromatographic tests for qualitative detection of cashew kernel<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL610-10<br>BL610-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Cashew | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3615 |
| **Coconut** | **Lateral flow test strips** | | |
| bioavid Lateral Flow Coconut | Immunochromatographic tests for qualitative detection of coconut<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL600-10<br>BL600-25 |
| **Hazelnut** | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Hazelnut | Sandwich ELISA to quantify traces of hazelnut in food; the kit is suitable for automation<br>Detection limit: 0.19 mg/kg hazelnut (0.17 - 0.22 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R6802 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Hazelnut | Immunochromatographic tests for qualitative detection of hazelnut<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL604-10<br>BL604-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Hazelnut | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3602 |
| **Macadamia nut** | **Lateral flow test strips** | | |
| bioavid Lateral Flow Macadamia nut | Immunochromatographic tests for qualitative detection of macadamia nut<br>Detection limit: 1 mg/kg (matrix dependend) | 25 test strips<br>Total assay time: 10 min | BL605-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Macadamia | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3616 |
| **Pecan nut** | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Pecan | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3618 |
| **Peanut** | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Peanut<br>AOAC-RI 030404 | Sandwich ELISA to quantify traces of peanut in food; the assay is calibrated to NIST SRM 2387 peanut butter; the kit is suitable for automation<br>Detection limit: 0.13 mg/kg peanut (0.04 - 0.20 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R6202 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Peanut | Immunochromatographic tests for qualitative detection of peanut<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL606-10<br>BL606-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Peanut | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3603 |

* SureFood® QUANTARD Allergen 40 must be used for quantification.

# Allergens

## Nuts and similar

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Pistachio** | **Lateral flow test strips** | | |
| bioavid Lateral Flow Pistachio | Immunochromatographic tests for qualitative detection of pistachio<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL611-10<br>BL611-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Pistachio | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3614 |
| **Walnut** | **Lateral flow test strips** | | |
| bioavid Lateral Flow Walnut | Immunochromatographic tests for qualitative detection of walnut<br>Detection limit: 10 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL607-10<br>BL607-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Walnut | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3607 |

## Oil plants

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Sesame | Sandwich ELISA to quantify traces of sesame in food<br>Detection limit: 0.14 mg/kg sesame (0.08 - 0.20 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R7202 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Sesam/Sesame | Immunochromatographic tests for qualitative detection of sesame<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL609-10<br>BL609-25 |
| | **Real-time PCR – qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Sesame | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3608 |

## Fish/Crustacean/Seafood

| | | | |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Crustacean | Sandwich ELISA to quantify traces of crustacean in food; the kit is suitable for automation<br>Detection limit: 2 mg/kg crustacean (0.9 - 2.6 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R7312 |
| | **Lateral flow test strips** | | |
| bioavid Lateral Flow Crustacean | Immunochromatographic tests for qualitative detection of crustacean<br>Detection limit: 10 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL616-10<br>BL616-25 |
| | **Real-time PCR - qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Crustaceans | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3612 |
| SureFood® ALLERGEN Fish | Detection limit: ≤ 1 mg/kg; limit of quantification: 4 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3610 |
| SureFood® ALLERGEN Molluscs | Detection limit: ≤ 0.4 mg/kg, only qualitative, depending on matrix and DNA preparation | 100 reactions | S3613 |

* SureFood® QUANTARD Allergen 40 must be used for quantification.

## Various

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Real-time PCR – qualitative DNA detection** | | |
| SureFood® ALLERGEN Oat | Detection limit: ≤ 500 DNA copies depending on the matrix and DNA preparation | 100 reactions | S7004 |
| SureFood® ALLERGEN Buckwheat | Detection limit: ≤ 5 DNA copies depending on the matrix and DNA preparation | 100 reactions | S7005 |
| | **Real-time PCR - qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Celery | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3605 |
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Lupine | Sandwich ELISA to quantify traces of lupin in food<br>Detection limit: 0.32 mg/kg lupin protein<br>(0.1 - 0.7 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R6102 |
| | **Real-time PCR - qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Lupin | Detection limit: ≤ 0.4 mg/kg; limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3611 |
| | **ELISA microtiter plates** | | |
| RIDASCREEN®FAST Senf/Mustard | Sandwich ELISA to quantify traces of mustard in food;<br>the assay detects yellow, white, brown and black mustard<br>Detection limit: 0.1 mg/kg mustard powder (0.08 - 0.11 matrix dependend) | 48 determinations<br>Incubation time: 30 min | R6152 |
| | **Lateral flow test strips** | | |
| bioavid Senf/Mustard | Immunochromatographic tests for qualitative detection of mustard<br>Detection limit: 1 mg/kg (matrix dependend) | 10 test strips<br>25 test strips<br>Total assay time: 10 min | BL603-10<br>BL603-25 |
| | **Real-time PCR - qualitative and/or quantitative DNA detection** | | |
| SureFood® ALLERGEN Mustard | Detection limit: ≤ 0.4 mg/kg limit of quantification: 1 mg/kg depending on matrix and DNA preparation | 100 reactions* | S3609 |
| SureFood® Apricot | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S7007 |

* SureFood® QUANTARD Allergen 40 must be used for quantification.

# Allergens

## Real-time PCR – multiplex

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Multiplex Screening** | **Real-time PCR – qualitative DNA detection** | | |
| SureFood® ALLERGEN 4plex Peanut/Hazelnut/Walnut + IAC | Detection limit:<br>≤ 1 mg/kg peanut<br>≤ 0,4 mg/kg hazelnut<br>≤ 0,4 mg/kg walnut;<br>depending on matrix and DNA preparation | 100 reactions | S3402 |
| SureFood® ALLERGEN 4plex Soya/Celery/Mustard + IAC | Detection limit ≤ 0.4 mg/kg depending on matrix and DNA preparation | 100 reactions | S3401 |
| SureFood® ALLERGEN 4plex Macadamia/Brazil Nut/Pecan + IAC | Detection limit: ≤ 0.4 mg/kg depending on matrix and DNA preparation | 100 reactions | S3403 |
| SureFood® ALLERGEN 4plex Cereals | Detection limit: ≤ 1 mg/kg depending on matrix and DNA preparation | 100 reactions | S7006 |

## Accessories

| | | | |
|---|---|---|---|
| **Real-time PCR** | **DNA preparation** | | |
| SureFood® PREP Advanced | For highly processed matrices (food and feed) | 50 preparations | S1053 |
| **Real-time PCR** | **Laboratory reference material for quantification** | | |
| SureFood® QUANTARD Allergen 40 | Corn flour contains 12 potential allergens in food except sulphite and lactose with concentration of 40 mg/kg;<br>the material has been developed for PCR quantification of allergens in food | 2 grams | S3301 |
| **Lateral Flow** | **Accessories** | | |
| bioavid Wischtest Kit/Swabbing Kit | Swabbing kit with wood swabs for sampling of allergen residues on surface (e.g. production lines) for bioavid lateral flow kits | 25 swabs, vials, pipettes, 10 ml buffer concentrate | BS800-25 |
| bioavid Wischtest Kit/Swabbing Kit (Plastic) | Swabbing kit with single packed plastic swabs for sampling of allergen residues on surface (e.g. production lines) for bioavid test strips | 25 swabs in two single packaged plastic bags, vials, pipettes,<br>10 ml buffer concentrate | BS801-25 |
| bioavid Absorptionspuffer/Absorbent Buffer | Buffer for preparation of polyphenol containing and strongly colored samples (e.g. coffee, red wine) for bioavid lateral flow kits | 25 vials<br>(9 ml buffer each) | BS810-25 |
| | **Service by bioavid** | | |
| Laboratory service | Service for the validation of difficult food matrices | Approx. 1 week processing time | on request |

# Allergens

| Parameters | RIDA®QUICK bioavid | RIDASCREEN® | SureFood® | Enzytec™ |
|---|---|---|---|---|
| | Lateral flow | ELISA | Real-time PCR | Enzymatic |
| Almond | ● | ●● | ● | |
| Brazil nut | ● | | ●● | |
| Cashew kernel | ● | ● | ● | |
| Casein | | ●● | | |
| Celery | | | ●● | |
| Coconut | ● | | | |
| Crustacean | ● | ●● | ● | |
| Egg | ● | ●● | | |
| Fish | | | ● | |
| Gliadin/gluten | ● | ●● | ● | |
| Gliadin/gluten fragments | | ● | | |
| Glutamic acid | | | | ● |
| Hazelnut | ● | ●● | ●● | |
| Histamine | | ●● | | ●● |
| ß-Lactoglobulin | | ●● | | |
| ß-Lactoglobulin fragments | | ● | | |
| Lactose | | | | ● |
| Lupine | | ● | ● | |
| Lysozyme | | ● | | |
| Macadamia | ● | | ●● | |
| Milk | ● | ●● | | |
| Molluscs | | | ● | |
| Mustard | ● | ● | ●● | |
| Peanut | ● | ●● | ●● | |
| Pecan | | | ●● | |
| Pistachio | ● | | ● | |
| Sesame | ● | ● | ● | |
| Soya | ● | ●● | ●● | |
| Sulfite | | | | ● |
| Walnut | ● | | ●● | |

Multiplex tests:

- ● SureFood® ALLERGEN 4plex Soya/Celery/Mustard + IAC (Art. No. S3401)
- ● SureFood® ALLERGEN 4plex Peanut/Hazelnut/Walnut + IAC (Art. No. S3402)
- ● SureFood® ALLERGEN 4plex Macadamia/Brazil Nut/Pecan + IAC (Art. No. S3403)
- ● ELISA is suitable for automation

# GMO analysis in food and feed

**Commercially available genetically modified organisms (GMO) are usually transgenic plants in which DNA from foreign species were artificially implemented.**

These DNA sequences, mostly for herbicide and/or insect resistance are enveloped in a frame of viral or bacterial DNA sequences which serves as promoters or terminators. Different international and national legislations and labelling regulations require a multi-stage analysis, for which real-time PCR is the method of choice. In October 2015, the European Network of GMO Laboratories (ENGL) defined minimum performance requirements, which are fulfilled by the SureFood® kits.

1. The presence of GMOs can be screened by identifying the genetic sequence elements 35S, NOS or FMV. Further genetic elements may be expected in the future. 35S positive results should be confirmed for absence of natural contamination with the cauliflower mosaic virus using the CaMV detection kit. Furthermore, the efficiency of the DNA preparation should be confirmed using plant DNA, when analysing a new matrix.
2. For GMO positive samples the identification of the GMO event is of main interest, to classify the food product as approved or illegal GMO. In Europe the legislation EC 1829/2003 and 1830/2003 describes the relevant regulations. Non-approved GMO products are not allowed to enter or to be produced or processed in Europe. A zero tolerance strategy is in force for Europe, while for feed samples a technical threshold of 0.1 % has been established (EC 618/2011). Food products with a content of > 0.9 % approved GMO per matrix must be labelled.
3. For approved GMOs in food samples quantification in the relevant range of approximately 0.9 % is of main interest. The GMO content in DNA copy numbers can be quantified relative to the plant matrix and the results will be given in percent.

## SureFood® PREP Basic/Advanced

- Efficient, streamlined DNA sample preparation from food and feed matrices
- Highly purified DNA
- For raw and high processed food and feed samples

## SureFood® GMO SCREEN

- Multiplex assay for 35S/NOS/FMV + IAC, BAR/NPTII/PAT/CTP2:CP4 EPSPS, Corn/Soya/Canola/Cotton
- Single assays for vectors

## SureFood® GMO QUANT

- Identification and quantification
- Robust detection system
- Wide product range
- Suitable for most available real-time thermocyclers

# GMO

## DNA preparation

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **DNA preparation** | | | |
| SureFood® PREP Basic | DNA preparation of food and feed | 100 preparations | S1052 |
| SureFood® PREP Advanced | DNA preparation of highly processed food and feed | 50 preparations | S1053 |
| SureFood® PREP Add-On | DNA preparation kit for 2 g sample weight in conjunction with SureFood® PREP Basic (S1052) | 15 extractions | S1055 |
| SureFast® Animal+Plant Control 3plex | Extraction control for plant or animal matrix including internal control DNA (ICD) Detection limit: ≤ 500 DNA copies depending on matrix and DNA preparation | 100 reactions | F4053 |

## Real-time PCR screening

| | | | |
|---|---|---|---|
| **Screening** | | | |
| SureFood® GMO Plant PLUS | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2049 |
| SureFood® GMO SCREEN CaMV | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2027 |
| SureFood® GMO SCREEN P35S:BAR Rice | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 2 x 50 reactions | S2022 |
| SureFood® GMO SCREEN 35S/NOS/FMV | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions* | S2026 |
| **Multiplex Screening** | | | |
| SureFood® GMO SCREEN 4plex 35S/NOS/FMV + IAC | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2126 |
| SureFood® GMO Plant 4plex Corn/Soya/Canola/Cotton | Detection limit: ≤ 4 mg/kg depending on matrix and DNA preparation | 100 reactions | S2156 |
| SureFood® GMO Plant 4plex Corn/Soya/Canola + IAC | Detection limit: ≤ 4 mg/kg depending on matrix and DNA preparation | 100 reactions | S2158 |
| SureFood® GMO SCREEN 4plex BAR/NPTII/PAT/CTP2:CP4 EPSPS | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2127 |
| SureFood® GMO SCREEN 4plex BAR/PAT/CrylAb/CTP2:CP4 EPSPS | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2128 |

* Includes additional 100 reactions of Inhibition Control Mix (ICM).

GMO

## Real-time PCR – qualitative DNA detection

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Canola** | | | |
| SureFood® GMO ID MS8 Canola | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2062 |
| **Corn** | | | |
| SureFood® GMO ID MIR162 Corn | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2035 |
| SureFood® GMO ID MON863 Corn | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2037 |
| **Rice** | | | |
| SureFood® GMO ID Bt63 Rice | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 2 x 50 reactions | S2024 |
| **Soya** | | | |
| SureFood® GMO ID Roundup Ready Soya | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2030 |
| SureFood® GMO ID RR2Y Soya | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2034 |
| SureFood® GMO ID A2704-12 Soya | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation | 100 reactions | S2057 |
| **Multiplex real-time PCR** | | | |
| SureFood® GMO ID 4plex Soya I | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation<br>Events: MON87708, CV127/DP305423/MON87701/ MON87769 | 100 reactions | S2161 |
| SureFood® GMO ID 4plex Soya II | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation<br>Events: RR-Soya/RR-2 Yield Soya/A2704-12 Soya/A5547-127 Soya | 100 reactions | S2162 |
| SureFood® GMO ID 4plex Canola I | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation<br>Events: MS8/GT73/T45 | 100 reactions | S2166 |
| SureFood® GMO ID 4plex Canola II | Detection limit: ≤ 5 DNA copies depending on matrix and DNA preparation<br>Events: MON88302/DP73496/RF3 | 100 reactions | S2167 |
| SureFood® GMO ID 4plex Corn I | Events: MON810/TC1507/NK603/MON89034<br>limit of detection of ≤ 5 DNA copies. This is equivalent to approx. 0.01 % for unprocessed corn grain. | 100 reactions | S2170 |

** 1 x 50 reactions for the detection of the reference gene.

# GMO

## Real-time PCR – quantitative DNA detection

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Canola** | | | |
| SureFood® GMO QUANT GT73 Canola | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2061 |
| **Corn** | | | |
| SureFood® GMO QUANT Bt176 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2015 |
| SureFood® GMO QUANT Bt11 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2016 |
| SureFood® GMO QUANT T25 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2017 |
| SureFood® GMO QUANT MON810 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2019 |
| SureFood® GMO QUANT 35S Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2020 |
| SureFood® GMO QUANT NK603 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2050 |
| SureFood® GMO QUANT MON863 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2051 |
| SureFood® GMO QUANT MIR162 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2135 |
| SureFood® GMO QUANT GA21 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2054 |
| SureFood® GMO QUANT TC1507 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0,1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2081 |
| SureFood® GMO QUANT MON89034 Corn | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0,1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2071 |
| **Soya** | | | |
| SureFood® GMO QUANT Roundup Ready Soya | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2014 |
| SureFood® GMO QUANT 35S Soya | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2028 |
| SureFood® GMO QUANT RR2Y Soya | Limit of detection: ≤ 5 DNA-copies; Limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S2029 |

## Reference material

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| SureFood® GMO Plant Reference Sample | 0.1% Canola/Corn/Rice/Soya | 2 gram | S2150 |

# Identification of animal species/risk material/BSE

**Due to the increasing complexity of meat supply chains, and prevalent product falsifications, species identification testing has become a cornerstone of food quality assurance and fraud prevention. Real-time PCR and ELISA deliver robust, reliable results even from processed food and feed samples.**

**Animal species detection**
The aspects of animal species detection might be categorized into three application groups:

- **Product falsification**
  Product falsification with cheaper undeclared meat might be identified qualitatively using the ANIMAL ID and ELISA-TEK™ and quantitatively using the ANIMAL QUANT kits.
- **Species detection**
  In some cases, especially for religious aspects such as kosher or halal with a zero tolerance strategy, highly sensitive qualitative detection is required. The ANIMAL ID Pork SENS PLUS kit enables an extremely sensitive detection.
- **Fish species detection**
  According to the EC 1379/2013 regulation fish products must be labelled with the common trade name and the scientific name. Fish ID real-time kits are available for the most important fish species.
- **Feed**
  Due to the ending of the BSE crisis, it might be expected that meat and bone meal (MBM) will be used to feed animals again. However, feeding to ruminants should be avoided.

Due to its stability, DNA is an excellent marker for animal identification. Real-time PCR can be used even for processed food and feed samples, with the exception of some highly processed products such as gelatin. The new product line with Internal Amplification and Animal Control (IAAC) has higher sensitivity and includes an amplification and extraction control.

## SureFood® PREP Basic

- Efficient, streamlined DNA sample preparation from food and feed matrices
- Highly purified DNA

## SureFood® ANIMAL ID

- Identification and quantification
- Multiplex assays
- Internal amplification and animal control as extraction control

# Animal species indentification/risk material/BSE

## Real-time PCR – qualitative DNA detection

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **DNA preparation** | | |
| SureFood® PREP Basic | DNA preparation of food and feed | 100 preparations | S1052 |
| SureFast® Animal+Plant Control 3plex | Extraction control for plant or animal matrix including internal control DNA (ICD) Detection limit: ≤ 500 DNA copies. | 100 reactions | F4053 |
| **Multiplex screening** | | | |
| SureFood® ANIMAL ID 4plex Beef/Sheep/Goat + IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6121 |
| SureFood® ANIMAL ID 4plex Pork/Chicken/Turkey + IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6123 |
| SureFood® ANIMAL ID 4plex Beef/Horse/Pork + IAAC* | Detection limit: Pork 0.5 %, Beef, Horse 0.1 % depending on matrix and DNA preparation | 100 reactions | S6126 |
| SureFood® ANIMAL ID 3plex Water Buffalo/Beef + IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6130 |
| SureFood® ANIMAL ID 4plex Camel/Horse/Donkey + IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6131 |
| SureFood® ANIMAL ID Horse/Donkey + IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6119 |
| SureFood® ANIMAL ID Cat/Dog + IAAC* | Detection limit: 0.5 % depending on matrix and DNA preparation | 100 reactions | S6112 |
| **Farm animals** | | | |
| SureFood® ANIMAL ID Beef IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6113 |
| SureFood® ANIMAL ID Horse IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6118 |
| SureFood® ANIMAL ID Pork SENS PLUS | Detection limit: ≤ 0.0001 % depending on matrix and DNA preparation | 100 reactions | S6017 |
| SureFood® ANIMAL ID Pork IAAC* | Detection limit: 0.5 % depending on matrix and DNA preparation | 100 reactions | S6114 |
| SureFood® ANIMAL ID Water Buffalo IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6117 |
| **Poultry** | | | |
| SureFood® ANIMAL ID Chicken IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6115 |
| SureFood® ANIMAL ID Turkey IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6116 |
| SureFood® ANIMAL ID Poultry IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6125 |
| **Other species** | | | |
| SureFood® ANIMAL ID Rabbit IAAC* | Detection limit: 0.1 % depending on matrix and DNA preparation | 100 reactions | S6120 |

* IAAC = Internal Amplification and Animal Control.

## Real-time PCR – quantitative DNA detection

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Farm animals** | | | |
| SureFood® ANIMAL QUANT Beef | Detection limit: ≤ 5 DNA copies; limit of quantification: 0.04 % depending on matrix and DNA preparation | 2 x 50 reactions** | S1010 |
| SureFood® ANIMAL QUANT Equus | Detection limit: ≤ 5 DNA copies; limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S1016 |
| SureFood® ANIMAL QUANT Pork | Detection limit: ≤ 5 DNA copies; limit of quantification: 0.04 % depending on matrix and DNA preparation | 2 x 50 reactions** | S1011 |
| **Poultry** | | | |
| SureFood® ANIMAL QUANT Chicken | Detection limit: ≤ 5 DNA copies; limit of quantification: 0.1 % depending on matrix and DNA preparation | 2 x 50 reactions** | S1014 |

** 1 x 50 reactions for the detection of the reference gene.

## Animal species indentification/risk material/BSE

### SureFood® FISH ID**

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Fish – tuna** | | | |
| SureFood® FISH ID Katsuwonus pelamis IAAC* | Detection of skipjack tuna; Detection limit: 1 % depending on matrix and DNA preparation | 50 reactions | S6314 |
| **Fish – cod-like** | | | |
| SureFood® FISH ID Gadus chalcogrammus IAAC* | Detection of Alaska pollock; Detection limit: 5 % depending on matrix and DNA preparation | 50 reactions | S6313 |
| SureFood® FISH ID Gadus macrocephalus IAAC* | Detection of pacific cod; Detection limit: 2 % depending on matrix and DNA preparation | 50 reactions | S6308 |
| SureFood® FISH ID Gadus morhua IAAC* | Detection of atlantic cod; Detection limit: 0.5 % depending on matrix and DNA preparation | 50 reactions | S6310 |
| SureFood® FISH ID Melanogrammus aeglefinus IAAC* | Detection of haddock; Detection limit: 1 % depending on matrix and DNA preparation | 50 reactions | S6307 |
| SureFood® FISH ID Merlangius merlangus IAAC* | Detection of whiting; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6312 |
| SureFood® FISH ID Merluccius merluccius IAAC* | Detection of european hake; Detection limit: 1 % depending on matrix and DNA preparation | 50 reactions | S6311 |
| SureFood® FISH ID Pollachius virens IAAC* | Detection of pollock/saithe; Detection limit: 1 % depending on matrix and DNA preparation | 50 reactions | S6309 |
| **Fish – salmon-like** | | | |
| SureFood® FISH ID Oncorhynchus gorbuscha IAAC* | Detection of humpback salmon; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6303 |
| SureFood® FISH ID Oncorhynchus mykiss IAAC* | Detection of rainbow trout; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6302 |
| SureFood® FISH ID Oncorhynchus nerka IAAC* | Detection of red salmon; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6304 |
| SureFood® FISH ID Oncorhynchus tshawytscha IAAC* | Detection of chinook salmon; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6301 |
| SureFood® FISH ID Salmo salar IAAC* | Detection of atlantic salmon; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6306 |
| SureFood® FISH ID Salmo trutta IAAC* | Detection of trout; Detection limit: 0.1 % depending on matrix and DNA preparation | 50 reactions | S6305 |
| **Fish – multiplex** | | | |
| SureFood® FISH ID 3plex Halibut IAAC* | Differentiation of white (Hippoglossus hippoglossus) and black halibut (Reinhardtius hippoglossoides); Detection limit: 1 %, depending on matrix and DNA preparation | 50 reactions | S6201 |

* IAAC = Internal Amplification and Animal Control.
** All Fish ID kits are R&D versions.

## ELISA-based species identification in food and feed

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Raw meat species kits** | **ELISA microtiter plates** | | |
| ELISA-TEK™ Raw Mixed Species Kit | Assay for the positive identification of species content (customized) in raw samples | 96 determinations<br>Incubation time 50 minutes | 510501 |
| ELISA-TEK™ Raw 3 Species Kit | Assay for the positive identification of species content (cow, pig, poultry) in raw samples | 32 determinations per species<br>Incubation time 50 minutes | 510503 |
| ELISA-TEK™ Raw 4 Species Kit | Assay for the positive identification of species content (cow, pig, poultry sheep) in raw samples | 24 determinations per species<br>Incubation time 50 minutes | 510504 |
| ELISA-TEK™ Raw Beef Kit | Assay for the positive identification of species content (beef) in raw samples | 96 determinations<br>Incubation time 50 minutes | 510511 |
| ELISA-TEK™ Raw Pork Kit | Assay for the positive identification of species content (pork) in raw samples | 96 determinations<br>Incubation time 50 minutes | 510521 |
| ELISA-TEK™ Raw Poultry Kit | Assay for the positive identification of species content (poultry) in raw samples | 96 determinations<br>Incubation time 50 minutes | 510531 |
| ELISA-TEK™ Raw Sheep Kit | Assay for the positive identification of species content (sheep) in raw samples | 96 determinations<br>Incubation time 50 minutes | 510541 |
| ELISA-TEK™ Raw Horse Kit | Assay for the positive identification of species content (horse) in raw samples | 96 determinations<br>Incubation time 50 minutes | 510551 |
| **Cooked meat species kits** | **ELISA microtiter plates** | | |
| ELISA-TEK™ Cooked Meat Mixed Species Kit | Assay for the positive identification of species content (customized) in cooked samples | 96 determinations<br>Incubation time 3 h | 510601 |
| ELISA-TEK™ Cooked Meat 3 Species Kit | Assay for the positive identification of species content (beef, pork, poultry) in cooked samples | 32 determinations per species<br>Incubation time 3 h | 510603 |
| ELISA-TEK™ Cooked Meat 4 Species Kit | Assay for the positive identification of species content (beef, pork, poultry, sheep) in cooked samples | 24 determinations per species<br>Incubation time 3 h | 510604 |
| ELISA-TEK™ Cooked Meat Beef Kit | Assay for the positive identification of species content (beef) in cooked samples | 96 determinations<br>Incubation time 3 h | 510611 |
| ELISA-TEK™ Cooked Meat Pork Kit | Assay for the positive identification of species content (pork) in cooked samples | 96 determinations<br>Incubation time 3 h | 510621 |
| ELISA-TEK™ Cooked Meat Poultry Kit | Assay for the positive identification of species content (poultry) in cooked samples | 96 determinations<br>Incubation time 3 h | 510631 |
| ELISA-TEK™ Cooked Meat Sheep Kit | Assay for the positive identification of species content (sheep) in cooked samples | 96 determinations<br>Incubation time 3 h | 510641 |
| ELISA-TEK™ Cooked Meat Horse Kit | Assay for the positive identification of species content (horse) in cooked samples | 96 determinations<br>Incubation time 3 h | 510651 |
| ELISA-TEK™ Cooked Meat Deer Kit | Assay for the positive identification of species content (deer) in cooked samples | 96 determinations<br>Incubation time 3 h | 510661 |
| **Meat and bone meal kits** | **ELISA microtiter plates** | | |
| MELISA-TEK™ Meat Species Ruminant Kit | Assay for the positive identification of species content (ruminant) in meat and bone meals, animals feeds, and cooked and uncooked foods | 96 determinations<br>Incubation time 1 h 20 | 510311 |
| MELISA-TEK™ Meat Species Pork Kit | Assay for the positive identification of species content (porcine) in meat and bone meals, animals feeds, and cooked and uncooked foods | 96 determinations<br>Incubation time 1 h 20 | 510321 |
| MELISA-TEK™ High Sensitivity Extraction Kit | This kit provides a protocol and all materials to improve the sensitivity of the MELISA-TEK™ RUMINANT assay | | 510391 |
| **Pangasius** | **Test strips** | | |
| EZ PANGASIUS™ Pangasius Rapid Kit | Assay for the positive identification of species content (pangasius) in a sample | 10 test strips | 510EZP |
| **Pork** | **Test strips** | | |
| ELISA-TEK™ EZ Pork | Assay for the positive identification of species content (pork) in a sample | 10 test strips | 530EZPK-10 |

# Animal species indentification/risk material/BSE

## Risk material

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **ELISA microtiter plates** | | |
| RIDASCREEN® Risk Material | Enzyme immunoassay for quantitative analysis of risk material (CNS) in processed meat and meat products<br>Detection limit: < 0.2 % for CNS tissue | 96 determinations<br>Incubation time: 1 hr | R6701 |
| RIDASCREEN® Risk Material 10/5 | Enzyme immunoassay for qualitative analysis of risk material (CNS) in raw meat, meat products and on contaminated surfaces<br>Detection limit: < 0.1 % for CNS tissue | 96 determinations<br>Incubation time: 15 min | R6703 |

## BSE

| | | | |
|---|---|---|---|
| | **BSE/antibody** | | |
| RIDA®mAb L42 | Monoclonal antibody for the detection of prion-protein with immunohistochemistry (IHC) and immunoblot | 23 µg | R8005 |
| RIDA®mAb P4 | Monoclonal antibody for the detection of prion-protein with immunohistochemistry (IHC) and immunoblot | 0.1 mg | R8008 |

# Analysis for microbiological food safety

**Rapid test formats for reliable microbiological analysis in food and plants for highly specific, sensitive and fast test combinations for use with a wide range of applications.**

### Product testing

All kinds of commodities are potentially at risk of contamination by spoiling organisms and pathogens. Therefore, R-Biopharm offers reliable kits for the analysis of meat and meat-products, dairy products, egg and egg-products, vegetable, fruits, herbs and spices, beverages, cereals and cereal-products as well as prepared meals. Well-established methods for on-site testing are classic microbiological testing, highly specific detection with real-time PCR, or confirmation of bacterial toxins by ELISA-tests.

### Production surrounding area and condition

Quality and safety standards are considered when minimizing the risk of product contamination.

Important characteristics for tests used in efficient hygiene and cleaning control are:

- High sensitivity
- Rapidness
- Repeatability

Reliability of results is important for immediate and long-term decisions.

## Bacterial toxins and pathogens

### RIDASCREEN® ELISA

- Detection of bacterial toxins
- Detection of pathogens

### Compact Dry

Dry nutrient media for detection of pathogens

## Bacteria, yeast and mould, viruses

### SureFast® real-time PCR
### GEN-IAL® real-time PCR

- For screening und species identification
- Effective DNA/RNA extraction
- Multiplex real-time kits

### Compact Dry

Dry nutrient media for enumeration of microorganisms

## Hygiene & cleaning

### Compact Dry with wet swab systems, RIDA®STAMP

Nutrient media for detection of microorganisms

### Lumitester PD-30 with LuciPac® Pen

- Sensitive AMP/ATP detection
- Automatic alignment of measured data
- Software based evaluation

### RIDA®CHECK

- Detection of protein residues
- Colorimetric test for rapid cleaning control

## Microbiology/hygiene

# Culture medium systems for colony counting and pathogen detection in food or surface samples

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Compact Dry** | **Nutrient pads** | | |
| Compact Dry AQ | Test plate with nutrient pad for quantitative detection of heterotrophic water bacteria | 100 determinations<br>40 determinations | HS9541<br>HS9542 |
| Compact Dry CC | Test plate with nutrient pad for detection of total aerobic count in teaproducts | 100 determinations<br>40 determinations | HS7311<br>HS7312 |
| Compact Dry CF<br>MicroVal MV0806-003L;<br>NordVal 35;<br>AOAC-RI 110401 | Test plate with nutrient pad for quantitative detection of coliforms | 100 determinations<br>40 determinations | HS8791<br>HS8792 |
| Compact Dry EC<br>MicroVal MV0806-004LR;<br>NordVal 36;<br>AOAC-RI 110402 | Test plate with nutrient pad for quantitative detection of *E. coli* and coliforms | 100 determinations<br>40 determinations | HS8781<br>HS8782 |
| Compact Dry ETB<br>MicroVal MV0806-002LR;<br>NordVal 34 | Test plate with nutrient pad for quantitative detection of *Enterobacteriaceae* | 100 determinations<br>40 determinations | HS9431<br>HS9432 |
| Compact Dry ETC<br>NordVal 47 | Test plate with nutrient pad for quantitative detection of Enterococci | 100 determinations<br>40 determinations | HS9461<br>HS9462 |
| Compact Dry LS | Test plate with nutrient pad for quantitative detection of *Listeria* spp. | 100 determinations<br>40 determinations | HS8811<br>HS8812 |
| Compact Dry PA<br>MicroVal 2017LR66 | Test plate with nutrient pad for quantitative detection of *Pseudomonas aeruginosa* | 100 determinations<br>40 determinations | HS9491<br>HS9492 |
| Compact Dry SL | Test plate with nutrient pad for detection of *Salmonella* | 100 determinations<br>40 determinations | HS9401<br>HS9402 |
| Compact Dry TC<br>MicroVal RQA2007LR01;<br>NordVal 33;<br>AOAC-RI 10404 | Test plate with nutrient pad for detection of total aerobic count | 100 determinations<br>40 determinations | HS8771<br>HS8772 |
| Compact Dry VP | Test plate with nutrient pad for quantitative detection of *Vibrio parahaemolyticus* and *Vibrio* spp. | 100 determinations<br>40 determinations | HS8821<br>HS8822 |
| Compact Dry YM<br>MicroVal RQA2008LR10;<br>NordVal 43;<br>AOAC-RI 100401 | Test plate with nutrient pad for quantitative detection of yeast and mold | 100 determinations<br>40 determinations | HS8801<br>HS8802 |
| Compact Dry YMR<br>MicroVal 2016LR61;<br>NordVal 50 | Test plate with nutrient pad for rapid quantitative detection of yeast and mold in 48 - 72 h | 100 determinations<br>40 determinations | HS9801<br>HS9802 |
| Compact Dry X-BC | Test plate with nutrient pad for quantitative detection of *Bacillus cereus* | 100 determinations<br>40 determinations | HS9721<br>HS9722 |
| Compact Dry X-SA<br>MicroVal 2008LR14;<br>NordVal 42;<br>AOAC-RI 81001 | Test plate with nutrient pad for quantitative detection of *Staphylococcus aureus* | 100 determinations<br>40 determinations | HS9621<br>HS9622 |
| | **Accessories** | | |
| RIDA® 0.9 % NaCl, sterile | 1 ml sterile sodium chloride solution | 150 pieces (1 ml each) | Z0301 |
| Promedia ST-25 | Sampling device<br>(sterile swab in 10 ml sterile PBS buffer) | 10 pieces | Z0302 |
| Compact DrySwab | Sampling set (sterile swabs in 1 ml PBS/peptone buffer) | 40 pieces | ZCS1002953 |
| Dilution Rack-PBS | Dilution set for preparation of 10-fold dilution series<br>(9 ml PBS buffer per well) – sterile | 128 pieces | ZDP1000888 |
| Dilution Rack-MRD | Dilution set for preparation of 10-fold dilution series<br>(9 ml MRD buffer per well) – sterile | 128 pieces | ZDM1000889 |
| Opener for Dilution Rack | For sterile opening of Dilution Rack | 1 piece | ZOP1000887 |
| Frame – 100 $cm^2$ | Frame for definition of 100 $cm^2$ for swab sampling | 5 pieces | ZFR1600000 |

## Culture medium systems for surface specimen/hygiene monitoring

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| RIDA®STAMP Coliform | Agar stamp plate for surface monitoring of Coliforms on solid foods and environmental surfaces | 50 determinations<br>25 determinations | HS0411<br>HS0412 |
| RIDA®STAMP ECC | Agar stamp plate for surface monitoring of *E. coli* & Coliforms on solid foods and environmental surfaces | 50 determinations<br>25 determinations | HS0431<br>HS0432 |
| RIDA®STAMP Salmonella | Agar stamp plate for surface monitoring of *Salmonella* on solid foods and environmental surfaces | 25 determinations | HS0392 |
| RIDA®STAMP S. aureus | Agar stamp plate for surface monitoring of *Staphylococcus aureus* on solid foods and environmental surfaces | 25 determinations | HS0462 |
| RIDA®STAMP Total | Agar stamp plate for surface monitoring of total count on solid foods and environmental surfaces | 50 determinations<br>25 determinations | HS0291<br>HS0292 |
| RIDA®STAMP Total Desi | Agar stamp plate for surface monitoring of total count in case of presence of desinfectants on solid foods and environmental surfaces | 50 determinations<br>25 determinations | HS1831<br>HS1832 |
| RIDA®STAMP YM-P | Agar stamp plate for surface monitoring of fungi on solid foods and environmental surfaces | 50 determinations<br>25 determinations | HS0371<br>HS0372 |

# Microbiology/hygiene

## Pathogens & bacterial toxins

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **DNA preparation** | | |
| SureFast® PREP Bacteria | Preparation of bacteria DNA from enrichments | 100 preparations | F1021 |
| SureFast® Speed PREP | Speed preparation of bacteria- and parasites-DNA from enrichment cultures and tissue samples | 100 preparations | F1054 |
| ***Bacillus cereus*** | **Qualitative real-time PCR** | | |
| SureFast® Bacillus cereus group PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5126 |
| SureFast® Emetic Bacillus cereus PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5127 |
| ***Campylobacter*** | **Qualitative real-time PCR** | | |
| SureFast® Campylobacter PLUS (*C. jejuni, C. lari, C. coli*) | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5112 |
| ***Clostridium*** | **Qualitative real-time PCR** | | |
| SureFast® Clostridium botulinum Screening PLUS | Qualitative DNA detection<br>Detection of *C. botulinum* toxin groups A, B, E, F<br>Detection limit: ≤ 50 DNA copies, 1 cfu after enrichment | 100 reactions | F5110 |
| SureFast® Clostridium estertheticum PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5160 |
| SureFast® Clostridium perfringens PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5123 |
| ***Cronobacter*** | **Qualitative real-time PCR** | | |
| SureFast® Cronobacter PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5114 |
| SureFast® Cronobacter sakazakii PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5115 |
| ***E. coli*** | **Qualitative real-time PCR** | | |
| SureFast® Escherichia coli PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5157 |
| SureFast® EHEC/EPEC 4plex | Qualitative DNA detection of virulence genes *stx1, stx2, eae, ipaH (E. coli/Shigella* spp. differentiation*)* | 100 reactions | F5128 |
| SureFast® STEC Screening PLUS | Qualitative DNA detection of virulence factors *stx1* and *stx2*<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5105 |
| SureFast® STEC 4plex | Qualitative DNA detection of 0157, virulence gene *stx1/stx2* and *eae*<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5165 |
| SureFast® Escherichia coli Serotype I 4plex | Qualitative DNA detection of serotypes O26, O103, O121<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5167 |
| SureFast® Escherichia coli Serotype II 4plex | Qualitative DNA detection of serotypes O45, O111, O145<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5168 |
| ***Listeria*** | **Qualitative real-time PCR** | | |
| SureFast® Listeria Screening PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5117 |
| SureFast® Listeria monocytogenes PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5113 |

## Pathogens & bacterial toxins

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Multiplex** | **Qualitative real-time PCR** | | |
| SureFast® Foodborne Pathogens 4plex | Qualitative detection of *Escherichia coli* virulence factors (*stx1* [subtype a-d], *stx2* [subtype a-g] and *eae*), *Listeria monocytogenes* and *Salmonella* spp.<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5175 |
| ***Salmonella*** | **ELISA microtiter plates** | | |
| RIDASCREEN® Salmonella<br>AFNOR RBP 31/01-06/08 | Enzyme immunoassay for the determination of *Salmonella* in food, feed and environmental samples | 96 determinations | R4201 |
| | **DNA preparation** | | |
| SureFast® PREP Salmonella<br>AOAC-RI 041103 | DNA preparation of *Salmonella* | 100 preparations | F1007 |
| | **Qualitative real-time PCR** | | |
| SureFast® Salmonella PLUS<br>AOAC-RI 041103 | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5111 |
| SureFast® Salmonella Species/Enteritidis/Typhimurium 4plex | Qualitative detection of *Salmonella* species *S.* Enteritidis and *S.* Typhimurium<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5166 |
| | **Qualitative real-time PCR and DNA preparation** | | |
| SureFast® Salmonella ONE<br>MicroVal (2014LR43; ISO 16140-2)<br>AOAC-RI (081803) | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment<br>Kit includes DNA preparation | 100 reactions/<br>100 preparations | F5211 |
| ***Ornithobacterium*** | **Qualitative real-time PCR** | | |
| SureFast® ORT PLUS | Qualitative detection of *Ornithobacterium rhinotracheale*<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5164 |
| ***Staphylococcus*** | **ELISA microtiter plates** | | |
| RIDASCREEN® SET A, B, C, D, E | Enzyme immunoassay for identification of staphylococcus enterotoxins A, B, C, D and E in food and bacterial cultures<br>Detection limit: 0.25 ng/ml toxin (0.375 ng/g) | 12 determinations<br>Incubation time: 2 hrs 45 min | R4101 |
| RIDASCREEN® SET Total | Enzyme immunoassay for combined detection of staphylococcus enterotoxins (A - E) in food and bacterial cultures<br>Detection limit: 0.25 ng/ml toxin (0.375 ng/g) | 96 determinations<br>48 determinations<br>Incubation time: 2 hrs 45 min | R4105<br>R4106 |
| | **Qualitative real-time PCR** | | |
| SureFast® Staphylococcus aureus PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment | 100 reactions | F5116 |
| **MRSA** | **Qualitative real-time PCR** | | |
| SureFast® MRSA 4plex | FAM: *SCCmec/orfX*<br>ROX: *Staphylococcus aureus*<br>Cy5: *mecA/mecC* | 100 reactions | F7117 |
| ***Vibrio*** | **Qualitative real-time PCR** | | |
| SureFast® Vibrio 4plex | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment<br>(*V. cholerae, V. parahaemolyticus, V. vulnificus*) | 100 reactions | F5161 |
| ***Yersinia*** | **Qualitative real-time PCR** | | |
| SureFast® Yersinia enterocolitica PLUS | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5124 |
| ***Histomonas* (parasites)** | **Qualitative real-time PCR and DNA preparation** | | |
| SureFast® Histomonas meleagridis ONE | Qualitative DNA detection<br>Detection limit: ≤ 5 DNA copies,<br>Kit includes DNA preparation | 100 reactions/<br>100 preparations | F5213 |

# Microbiology/hygiene

## Viruses

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **DNA/RNA preparation** | | |
| SureFast® PREP DNA/RNA Virus | DNA/RNA preparation of viruses | 100 preparations | F1051 |
| | **Real-time reverse transcriptase PCR (qualitative detection)** | | |
| SureFast® Norovirus/Hepatitis A 3plex | Qualitative detection of Norovirus and Hepatitis A<br>Detection limit: ≤ 25 RNA copies | 100 reactions | F7124 |
| SureFast® Hepatitis A PLUS | Qualitative detection of Hepatitis A<br>Detection limit: ≤ 25 RNA copies | 100 reactions | F7125 |
| SureFast® Hepatitis E PLUS | Qualitative detection of Hepatitis E<br>Detection limit: ≤ 25 RNA copies | 100 reactions | F7142 |
| SureFast® Influenza A PLUS | Qualitative detection of influenza virus A<br>Detection limit: ≤ 25 RNA copies | 100 reactions | F7103 |
| SureFast® Influenza A H5/H7/H9 4plex | Qualitative detection and differentiation of influenza A-subtypes H5, H7 and H9<br>Detection limit: ≤ 25 RNA copies | 100 reactions | F7139 |

## Water analysis

| | | | |
|---|---|---|---|
| | **DNA preparation** | | |
| SureFast® PREP Aqua | DNA preparation of bacterial cells from water samples | 100 preparations | F1023 |
| ***Legionella*** | **Qualitative real-time PCR** | | |
| SureFast® Legionella Screen PLUS | Qualitative DNA detection of *Legionella* spp.<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5502 |
| SureFast® Legionella pneumophila PLUS | Qualitative DNA detection of *Legionella pneumophila*<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5501 |
| SureFast® Legionella 3plex | Qualitative DNA detection of *Legionella* spp. and *Legionella pneumophila*<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5505 |
| | **Qualitative real-time PCR** | | |
| SureFast® Parasitic Water Panel 4plex | Qualitative DNA detection of *Giardia intestinalis, Entamoeba histolytica* und *Cryptosporidium* spp.<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5506 |
| SureFast® Enterobacteriaceae Screening PLUS | Qualitative DNA detection of *Enterobactericeae*<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5507 |
| SureFast® Pseudomonas aeruginosa PLUS | Qualitative DNA detection of *Pseudomonas aeruginosa*,<br>Detection limit: ≤ 5 DNA copies | 100 reactions | F5503 |
| **AMP/ATP detection** | **Bioluminescence** | | |
| LuciPac® Pen AQUA | Test system for hygiene control in liquid samples (based on detection of ATP/AMP)<br>Reaction tubes with integrated sample stick for use with Lumitester PD-30 | 100 reactions | ZLA1002672 |
| | **Accessories** | | |
| RIDA® Clean Extract | Sample preparation kit for lubricants and paints to be used together with LuciPac® Pen AQUA | 20 reactions | ZLPP1002673 |

* Find more products for microbiological water analysis on page 72 under “Culture medium systems for colony counting and pathogen detection”.

## Beverage analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Beer** | **DNA-preparation** | | |
| GEN-IAL® Simplex® Easy DNA | DNA preparation of beverage samples | 100 preparations | Q001 |
| GEN-IAL® QuickGEN* Sample Preparation Centrifugation | DNA preparation of beverage samples, centrifugation | 100 preparations | Q002 |
| GEN-IAL® QuickGEN* Sample Preparation Filtration | DNA preparation of beverage samples, filtration | 100 preparations | Q004 |
| GEN-IAL® QuickGEN* Yeast Sample Preparation Centrifugation | DNA preparation of beverage samples mainly containing yeast | 100 preparations | Q005 |
| GEN-IAL® PolyBIND® | Polymer for sampling | 50 preparations | Q008 |
| | **Qualitative multiplex real-time PCR** | | |
| GEN-IAL® QuickGEN* P1 Screening high | DNA screening and differentiation of beer spoiling bacteria and yeasts (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*/yeast) | 48 reactions | Q021 |
| GEN-IAL® QuickGEN* P1 Screening low | DNA screening and differentiation of beer spoiling bacteria and yeasts (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*/yeast) | 48 reactions | Q022 |
| GEN-IAL® QuickGEN* P1 Screening white | DNA screening and differentiation of beer spoiling bacteria and yeasts (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*/yeast) | 48 reactions | Q023 |
| GEN-IAL® QuickGEN* P1 Screening low MG | DNA screening and differentiation of beer spoiling bacteria and yeasts (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*/yeast) | 48 reactions | Q024 |
| GEN-IAL® QuickGEN* P1 Screening | DNA screening and differentiation of beer spoiling bacteria and yeasts (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*/yeast) | 50 reactions | Q025 |
| GEN-IAL® QuickGEN* P1 Screening without yeast high | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) | 48 reactions | Q031 |
| GEN-IAL® QuickGEN* P1 Screening without yeast low | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) | 48 reactions | Q032 |
| GEN-IAL® QuickGEN* P1 Screening without yeast white | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) | 48 reactions | Q033 |
| GEN-IAL® QuickGEN* P1 Screening without yeast | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) | 50 reactions | Q035 |
| GEN-IAL® QuickGEN* P1 and S. diastaticus Screening high | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) and *Saccharomyces cerevisiae* var. *diastaticus* | 48 reactions | Q041 |
| GEN-IAL® QuickGEN* P1 and S. diastaticus Screening low | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) and *Saccharomyces cerevisiae* var. *diastaticus* | 48 reactions | Q042 |
| GEN-IAL® QuickGEN* P1 and S. diastaticus Screening white | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) and *Saccharomyces cerevisiae* var. *diastaticus* | 48 reactions | Q043 |
| GEN-IAL® QuickGEN* P1 and S. diastaticus Screening low MG | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) and *Saccharomyces cerevisiae* var. *diastaticus* | 48 reactions | Q044 |
| GEN-IAL® QuickGEN* P1 and S. diastaticus Screening | DNA screening and differentiation of beer spoiling bacteria (*Lactobacillus, Pediococcus/Megasphaera, Pectinatus*) and *Saccharomyces cerevisiae* var. *diastaticus* | 50 reactions | Q045 |

* QuickGEN kits deliver a rapid, easy one-step DNA lysis and amplification method. Pre-enriched samples as well as centrifuged or filtrated samples may be used with the kits with order no. Q002 or Q004 (Q005) and subsequent QuickGEN detection kits. Precoated stripes enable less pipetting steps. Different kits are suitable for different real-time thermocylclers:

Q**1 High profile: ABI 7500, Agilent MX3005P
Q**2 Low profile: MyGo Pro (2- and 3plex kits), ABI QuantStudio 5
Q**3 White strips: Bio-Rad CFX96, LightCycler® 480
Q**4 Low profile: MyGoPro (4plex kits)
Q**5 Liquid reagents without precoated strips

Other block cycler devices may be suitable as well. Information is available on request. Further parameters/species detection kits are available on request.

# Microbiology/hygiene

## Beverage analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Beer** | **Qualitative multiplex real-time PCR** | | |
| GEN-IAL® QuickGEN* P1 Screening and Hop resistance high | DNA screening and differentiation of beer spoiling bacteria and hop resistance genes | 48 reactions | Q051 |
| GEN-IAL® QuickGEN* P1 Screening and Hop resistance low | DNA screening and differentiation of beer spoiling bacteria and hop resistance genes | 48 reactions | Q052 |
| GEN-IAL® QuickGEN* P1 Screening and Hop resistance white | DNA screening and differentiation of beer spoiling bacteria and hop resistance genes | 48 reactions | Q053 |
| GEN-IAL® QuickGEN* P1 Screening and Hop resistance low MG | DNA screening and differentiation of beer spoiling bacteria and hop resistance genes | 48 reactions | Q054 |
| GEN-IAL® QuickGEN* P1 Screening and Hop resistance | DNA screening and differentiation of beer spoiling bacteria and hop resistance genes | 50 reactions | Q055 |
| GEN-IAL® QuickGEN* Beer yeast and bacteria differentiation high | Multiplex detection and identification of beverage spoiling bacteria and yeasts | 96 reactions/24 samples | Q071 |
| GEN-IAL® QuickGEN* Beer yeast and bacteria differentiation low | Multiplex detection and identification of beverage spoiling bacteria and yeasts | 96 reactions/24 samples | Q072 |
| GEN-IAL® QuickGEN* Beer yeast and bacteria differentiation white | Multiplex detection and identification of beverage spoiling bacteria and yeasts | 96 reactions/24 samples | Q073 |
| GEN-IAL® QuickGEN* Beer Differentiation high | Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers | 96 reactions/12 samples | Q081 |
| GEN-IAL® QuickGEN* Beer Differentiation low | Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers | 96 reactions/12 samples | Q082 |
| GEN-IAL® QuickGEN* Beer Differentiation white | Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers | 96 reactions/12 samples | Q083 |
| GEN-IAL® QuickGEN* Biofilm | Specific DNA detection of *Lactococcus lactis*, *Leuconostoc mesenteroides* and *Wickerhamomyces anomalus* | 50 reactions | Q095 |
| GEN-IAL® QuickGEN* Hop resistance | Specific DNA detection of hop resistance genes horA and horC / hitA and orf5 | 50 reactions | Q105 |
| GEN-IAL® QuickGEN* Pectinatus/ Megasphaera differentiation low | Specific DNA detection and differentiation of *Pectinatus* and *Megasphaera* | 48 reactions | Q112 |
| GEN-IAL® QuickGEN* Enterobacteriaceae spp. | DNA detection of *Enterobacteriaceae spp.* | 50 reactions | Q145 |
| GEN-IAL® QuickGEN* Yeast Top fermented high | Specific DNA detection of top fermented yeast | 48 reactions | Q151 |
| GEN-IAL® QuickGEN* Yeast Top fermented low | Specific DNA detection of top fermented yeast | 48 reactions | Q152 |
| GEN-IAL® QuickGEN* Yeast Top fermented white | Specific DNA detection of top fermented yeast | 48 reactions | Q153 |
| GEN-IAL® QuickGEN* Yeast Bottom fermented high | Specific DNA detection of bottom fermented yeast | 48 reactions | Q161 |
| GEN-IAL® QuickGEN* Yeast Bottom fermented low | Specific DNA detection of bottom fermented yeast | 48 reactions | Q162 |
| GEN-IAL® QuickGEN* Yeast Bottom fermented white | Specific DNA detection of bottom fermented yeast | 48 reactions | Q163 |
| GEN-IAL® QuickGEN* Yeast Wickerhamomyces anomalus | Specific DNA detection of *Wickerhamomyces anomalus* (*Pichia anomala*) | 50 reactions | Q175 |
| GEN-IAL® QuickGEN* Yeast Saccharomyces diastaticus low | Specific DNA detection of *S. cerevisiae* var. *diastaticus* | 48 reactions | Q182 |

* QuickGEN kits deliver a rapid, easy one-step DNA lysis and amplification method. Pre-enriched samples as well as centrifuged or filtrated samples may be used with CSE 0100, CSY 0100 or FSE 0100 and subsequent QuickGEN detection kits.

## Beverage analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Wine** | **DNA preparation** | | |
| GEN-IAL® Simplex® Easy Wine | DNA preparation of wine samples | 100 preparations | Q300 |
| GEN-IAL® Simplex® Easy Wine-Washing Solution | Additional washing solution for Q300 | 43 ml | Q301 |
| | **Qualitative multiplex real-time PCR** | | |
| GEN-IAL® QuickGEN* Wine Screening high | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*; *Oenococcus oeni*/ acetic acid bacteria/yeast | 48 reactions | Q321 |
| GEN-IAL® QuickGEN* Wine Screening low | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*; *Oenococcus oeni*/ acetic acid bacteria/yeastt | 48 reactions | Q322 |
| GEN-IAL® QuickGEN* Wine Screening white | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*; *Oenococcus oeni*/ acetic acid bacteria/yeast | 48 reactions | Q323 |
| GEN-IAL® QuickGEN* Wine Screening low MG | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*; *Oenococcus oeni*/ acetic acid bacteria/yeast | 48 reactions | Q324 |
| GEN-IAL® QuickGEN* Wine Screening without yeast high | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*/*Oenococcus oeni*/ acetic acid bacteria | 48 reactions | Q331 |
| GEN-IAL® QuickGEN* Wine Screening without yeast low | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*/*Oenococcus oeni*/ acetic acid bacteria | 48 reactions | Q332 |
| GEN-IAL® QuickGEN* Wine Screening without yeast white | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*/*Oenococcus oeni*/ acetic acid bacteria | 48 reactions | Q333 |
| GEN-IAL® QuickGEN* Wine Screening without yeast low MG | DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus*; *Pediococcus*/*Oenococcus oeni*/ acetic acid bacteria | 48 reactions | Q334 |
| GEN-IAL® Biogenic amines | Specific DNA detection of bacteria forming biogenic amines | 50 reactions | Q345 |
| GEN-IAL® QuickGEN* Oenococcus oeni high | Specific DNA detection of *Oenococcus oeni* | 48 reactions | Q351 |
| GEN-IAL® QuickGEN* Oenococcus oeni low | Specific DNA detection of *Oenococcus oeni* | 48 reactions | Q352 |
| GEN-IAL® QuickGEN* Oenococcus oeni white | Specific DNA detection of *Oenococcus oeni* | 48 reactions | Q353 |
| GEN-IAL® QuickGEN* Oenococcus oeni | Specific DNA detection of *Oenococcus oeni* | 50 reactions | Q355 |
| GEN-IAL® Dekkera bruxellensis Standard DNA | DNA standards for *Dekkera bruxellensis* quantification | 200.000 cfu | Q360 |
| GEN-IAL® QuickGEN* Yeast Dekkera bruxellensis quantitative high | Specific DNA detection of *Dekkera bruxellensis* | 48 reactions | Q371 |
| GEN-IAL® QuickGEN* Yeast Dekkera bruxellensis quantitative low | Specific DNA detection of *Dekkera bruxellensis* | 48 reactions | Q372 |
| GEN-IAL® QuickGEN* Yeast Dekkera bruxellensis quantitative white | Specific DNA detection of *Dekkera bruxellensis* | 48 reactions | Q373 |
| GEN-IAL® Dekkera bruxellensis quantitative FAM/ROX | Specific DNA detection of *Dekkera bruxellensis* FAM/ROX | 50 reactions | Q385 |
| GEN-IAL® Dekkera bruxellensis quantitative FAM/HEX | Specific DNA detection of *Dekkera bruxellensis* FAM/HEX | 50 reactions | Q395 |

* QuickGEN kits deliver a rapid, easy one-step DNA lysis and amplification method. Pre-enriched samples as well as centrifuged or filtrated samples may be used with Q002, Q004 or Q005 and subsequent QuickGEN detection kits.

# Microbiology/hygiene

## Beverage analysis

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| | **Qualitative multiplex real-time PCR** | | |
| GEN-IAL® QuickGEN* Acetic acid bacteria high | Specific DNA detection of acetic acid bacteria | 48 reactions | Q511 |
| GEN-IAL® QuickGEN* Acetic acid bacteria low | Specific DNA detection of acetic acid bacteria | 48 reactions | Q512 |
| GEN-IAL® QuickGEN* Acetic acid bacteria white | Specific DNA detection of acetic acid bacteria | 48 reactions | Q513 |
| GEN-IAL® QuickGEN* Acetic acid bacteria | Specific DNA detection of acetic acid bacteria | 50 reactions | Q515 |
| GEN-IAL® QuickGEN* Wild yeast 1 low | DNA screening and differentiation of wild yeast | 48 reactions | Q522 |
| GEN-IAL® QuickGEN* Wild yeast 1 | DNA screening and differentiation of wild yeast | 50 reactions | Q525 |
| GEN-IAL® QuickGEN* Wild yeast 2 low | DNA screening and differentiation of wild yeast | 48 reactions | Q532 |
| GEN-IAL® QuickGEN* Wild yeast 2 | DNA screening and differentiation of wild yeast | 50 reactions | Q535 |
| GEN-IAL® QuickGEN* Yeast Differentiation high | DNA screening and differentiation of 12 yeasts | 96 reactions / 12 samples | Q541 |
| GEN-IAL® QuickGEN* Yeast Differentiation low | DNA screening and differentiation of 12 yeasts | 96 reactions / 12 samples | Q542 |
| GEN-IAL® QuickGEN* Yeast Differentiation white | DNA screening and differentiation of 12 yeasts | 96 reactions / 12 samples | Q543 |
| GEN-IAL® QuickGEN* Yeast Dekkera spp. high | Specific DNA detection of *Dekkera* spp. | 48 reactions | Q551 |
| GEN-IAL® QuickGEN* Yeast Dekkera spp. low | Specific DNA detection of *Dekkera* spp. | 48 reactions | Q552 |
| GEN-IAL® QuickGEN* Yeast Dekkera spp. white | Specific DNA detection of *Dekkera* spp. | 48 reactions | Q553 |
| GEN-IAL® QuickGEN* Yeast Dekkera spp. | Specific DNA detection of *Dekkera* spp. | 50 reactions | Q555 |
| GEN-IAL® QuickGEN* Yeast Zygosaccharomyces bailii high | Specific DNA detection of *Zygosaccharomyces bailii* | 48 reactions | Q561 |
| GEN-IAL® QuickGEN* Yeast Zygosaccharomyces bailii low | Specific DNA detection of *Zygosaccharomyces bailii* | 48 reactions | Q562 |
| GEN-IAL® QuickGEN* Yeast Zygosaccharomyces bailii white | Specific DNA detection of *Zygosaccharomyces bailii* | 48 reactions | Q563 |
| **Juice** | **DNA preparation** | | |
| GEN-IAL® Simplex® Easy® Spin DNA | Alicyclobacillus DNA extraction from fruit or vegetable juices or concentrates | 50 preparations | Q701 |
| | **Qualitative multiplex real-time PCR** | | |
| GEN-IAL® QuickGEN* Alicyclobacillus differentiation | DNA Screening of *Alicyclobacillus* spp., *A. acidocaldarius* and *A. acidoterrestris* in fruit juices or concentrates | 48 reactions | Q724 |
| | **Accessories** | | |
| GEN-IAL® Colour Compensation kit | Color compensation kit for multiplex assays | 5 reactions | Q800 |

* QuickGEN kits deliver a rapid, easy one-step DNA lysis and amplification method. Pre-enriched samples as well as centrifuged or filtrated samples may be used with Q002, Q004 or Q005 and subsequent QuickGEN detection kits.

## Test systems for cleaning control

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **AMP/ATP detection** | **Bioluminescence** | | |
| LuciPac® Pen | Test system for hygiene control on surfaces (based on detection of ATP/AMP) Reaction tubes with integrated swab for use with Lumitester PD-30 | 100 determinations | ZLP1002667 |
| **Protein tests** | **Swab tests** | | |
| RIDA®CHECK | Colorimetric test, ready-to-use swabs for the detection of protein residues on surfaces | 100 determinations<br>40 determinations | R1091<br>R1092 |

# Microbiology/hygiene

| | ELISA | Dry medium plates | DNA prep. + real-time PCR | Direct stamp plates | Swab tests |
|---|---|---|---|---|---|
| | RIDASCREEN® | Compact Dry | SureFast®/ GEN-IAL® | RIDA®STAMP | RIDA®CHECK |
| **Bacterial toxins** | | | | | |
| Staphylococcal enterotoxin (Toxins A - E) | ● | | | | |
| Staphylococcal enterotoxin (Total) | ●** | | | | |
| **Pathogens** | | | | | |
| *Bacillus cereus* spp. | | ● | ● | | |
| *emetic Bacillus cereus* | | | ● | | |
| *Campylobacter* | | | ● | | |
| *Clostridium botulinum, C. estertheticum, C. perfringens* | | | ● | | |
| *Cronobacter* spp., *Cronobacter sakazakii* | | | ● | | |
| EHEC/EPEC/STEC Screening | | | ● | | |
| *Escherichia coli eae* gene | | | ● | | |
| *Legionella* spp., *Legionella pneumophila* | | | ● | | |
| *Listeria monocytogenes* | | | ● | | |
| MRSA | | | ● | | |
| Parasitic Water Panel 4plex | | | ● | | |
| *Pseudomonas aeruginosa* | | ●* | ● | | |
| *Salmonella* | ●* | ● | ●* | ● | |
| *Salmonella* Serotype *enteritidis* & *typhimurium* | | | ● | | |
| *Staphylococcus aureus* | | ●* | ● | ● | |
| *Vibrio* spp., *V. parahaemolyticus, V. cholerae, V. vulnificus* | | ● | ● | | |
| *Yersinia enterocolitica* | | | ● | | |
| **Indicator Organism** | | | | | |
| Coliform bacteria | | ●* | | ● | |
| *Enterobacteriaceae* | | ●* | ● | | |
| *Enterococcus* | | ●* | | | |
| *Escherichia coli* | | ●* | ● | ● | |
| *Listeria* spp. | | ● | ● | | |
| *Pseudomonas* spp. | | | | ● | |
| *Staphylococcus aureus* | | ●* | ● | ● | |
| Total count | | ●* | | ● | |
| Total count in tea products | | ● | | | |
| Total count in water samples | | ● | | | |
| *Vibrio* spp. | | ● | ● | | |
| Yeasts & Molds | | ●* | | ● | |
| **Virus** | | | | | |
| Influenza A | | | ● | | |
| Hepatitis A | | | ● | | |
| Hepatitis E | | | ● | | |
| Norovirus I & II | | | ● | | |
| **Beverage Spoilers** | | | | | |
| Bacteria screening & Bacteria species | | | ● | | |
| Yeasts screening & Yeast species | | | ● | | |
| Biofilm formation species | | | ● | | |
| **Rapid Hygiene Monitoring** | | | | | |
| ATP/AMP | | | | | ● |
| Protein Test | | | | | ● |
| **Accessories** | ● | ● | | | ● |

* Officially validated test (AFNOR/MICROVAL/AOAC-RI)
** Officially validated by the European Reference Laboratory for Coagulase positive Staphylococci

# Equipment and accessories

**In laboratories equipment and machines are now routinely used to standardise analysis. Each analysis has specific needs and requirements which necessitates different accessories. This is where the team of technicians from R-Biopharm comes in.**

**What is the right equipment required for each test?**

We develop matching applications for an even easier, faster and more efficient performance and analysis. Whether an automated processing of an ELISA by a fully automated analyzer or a portable analyser for lateral flow test.

With the RIDA®SMART APP the quantitative evaluation of rapid tests is possible for the demand on-site. Our specialists improve and update these systems and devices continuously. That's how we can offer you the best support with state of the art technologies for your laboratory or on-site testing.

The range of equipment and software covers the full portfolio and requirements of R-Biopharm products.

The requirements for a high or low sample throughput in the laboratory will be observed: starting from optimal sample preparation, performance of test procedures, through analysing and evaluation for manually or fully automated applications for all products, their specific needs are considered.

**Everything for your analysis and performance just from one supplier.**

## RIDA®SMART APP

**Test evaluation**

Smartphone application for the quantitative analysis of lateral flow tests

## RIDA®ABSORBANCE 96

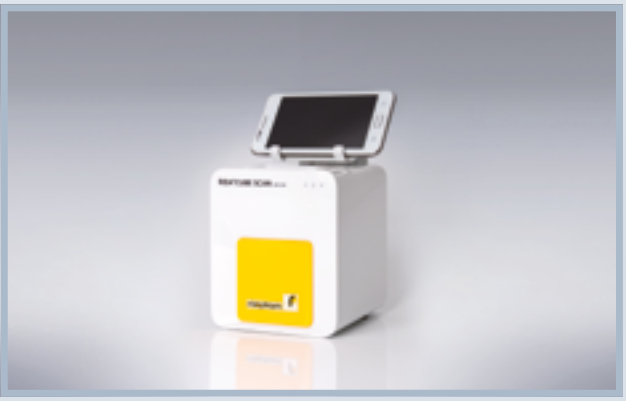
**Absorbance reader**

Innovative microtiter plate photometer including RIDASOFT® Win.NET software


## ThunderBolt®

**ELISA-Automate**

Fully automated device for ELISA analysis in microtiter plate format



## RIDA®CUBE SCAN

**Analytical device for single testings**

Automated device for carrying out enzymatic RIDA®CUBE tests

## RIDA®CYCLER

**Multiplex analysis**

Thermocycler for running real-time PCR tests

# Equipment/software/accessories

## Equipment

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **ELISA** | **Photometer** | | |
| RIDA®ABSORBANCE 96 | Microtiter plate photometer with RIDASOFT® Win.NET | 1 | ZRA96FF |
| **ELISA** | **Automates** | | |
| GEMINI | 2-microtiter plate analyser | 1 | ZGEMINI |
| ThunderBolt® | 2-microtiter plate analyser | 1 | ZTB |
| Bolt™ | 1-microtiter plate analyser | 1 | ZBOLT |
| DYNEX DS2® | 2-microtiter plate analyser | 1 | Z62000 |
| **Mycotoxin analysis** | **HPLC automate** | | |
| RIDA®CREST | Online handling system to be used in conjunction with IMMUNOPREP® ONLINE cartridges | 1 | ZRIDACREST 2000 |
| RIDA®CREST ICE | Automated cartridge exchange and high pressure dispenser units to be used in conjunction with the IMMUNOPREP® ONLINE cartridges | 1 | ZRIDACREST 1500 |
| **Enzymatic analysis** | **Autoanalyzer** | | |
| RIDA®CUBE SCAN340/546 Analyser set | Automatic analyser only for RIDA®CUBE test kits | 1 set | ZRCS0546 |
| RIDA®CUBE SCAN340/580 Analyser set | Automatic analyser only for RIDA®CUBE test kits | 1 set | ZRCS0580 |
| RIDA®CUBE SCAN Tablet PC | Separate tablet for replacement | 1 | ZRCT0500 |
| RIDA®CUBE SCAN Quality control tool | Verification tool for use with RIDA®CUBE SCAN | 1 set | ZRCSSZ0420 |
| **qPCR** | **qPCR thermocycler** | | |
| RIDA®CYCLER | qPCR thermocycler. 4 channels, incl. 1 box with reaction tubes | 1 | ZRCYCLER |
| RIDA®CYCLER-MIC-Tubes | Box with 960 reactions tubes and caps | 1 | ZRC-MIC-TUBES |
| RIDA®CYCLER TVS | Temperatur verification system | 1 | ZRCYCLER-TVS |
| **Mycotoxin rapid test** | **RIDA®QUICK** | | |
| RIDA®SMART APP STAND PIXEL XL | 3D printed smartphone stand for GOOGLE Pixel XL | 1 | ZRSAS PIXELXL |
| RIDA®SMART APP STAND MOTOG6 | 3D printed smartphone stand for Lenovo MOTOG6 | 1 | ZRSAS MOTOG6 |
| RIDA®SMART APP Mycotoxin Analyser SET | Analyzer set: 1x Smartphone, 1x Smartphone stand and 1x RIDA®SMART APP voucher | 1set | ZRSAM1000-SET |
| Google Pixel XL | Smartphone for the use of RIDA®SMART APP | 1 | ZRSAPIXELXL |

## Equipment

| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Microbiology** | | | |
| CULTURA® Mini Incubator | Incubator for incubations at 30 - 45 °C (Compact Dry, RIDA®STAMP, Pathogen ELISAs, microbiological MTP-format Vitamin analysis etc.) | 1 | ZC7140651 |
| Lumitester PD-30 | Luminometer for AMP/ATP measurement with LuciPac® Pen and LuciPac® Pen AQUA | 1 | ZLT-1402653 |
| Lumitester PD-20/PD-30 Control Kit | Positive control lamp with charger and negative control tubes for functional testing of Lumitester PD-20 and Lumitester PD-30 devices | 1 | ZLC1002657 |
| **Pipettes** | | | |
| R-Biopharm FP 50 | Pipette 50 µl | 1 unit | Z0006 |
| R-Biopharm FP 100 | Pipette 100 µl | 1 unit | Z0007 |
| R-Biopharm FP 1000 | Pipette 1000 µl | 1 unit | Z0008 |
| R-Biopharm FP 150 | Pipette 150 µl | 1 unit | Z0009 |
| **Pipettes for RIDA®QUICK mycotoxin analysis** | | | |
| PE-Pipettes | 1 ml pipette for RIDA®QUICK tests | 100 | Z0005 |
| PP-Test Tubes | 50 ml test tubes for RIDA®QUICK tests | 25 | Z210261 |

## Software

| | | | |
|---|---|---|---|
| **ELISA** | | | |
| RIDASOFT® Win.NET | Software for measurement, evaluation and documentation of RIDASCREEN® ELISAs and other R-Biopharm distributed products | 1 unit | Z9996 |
| **Mycotoxins lateral flow tests** | **RIDA®QUICK** | | |
| RIDA®SMART APP* | Software application for the quantification of RIDA®QUICK RQS mycotoxin lateral flow tests | 1 voucher | ZRSAM1000 |

* Applicable only in conjunction with certain smartphones recommended by R-Biopharm.

# Equipment/software/accessories

## Accessories

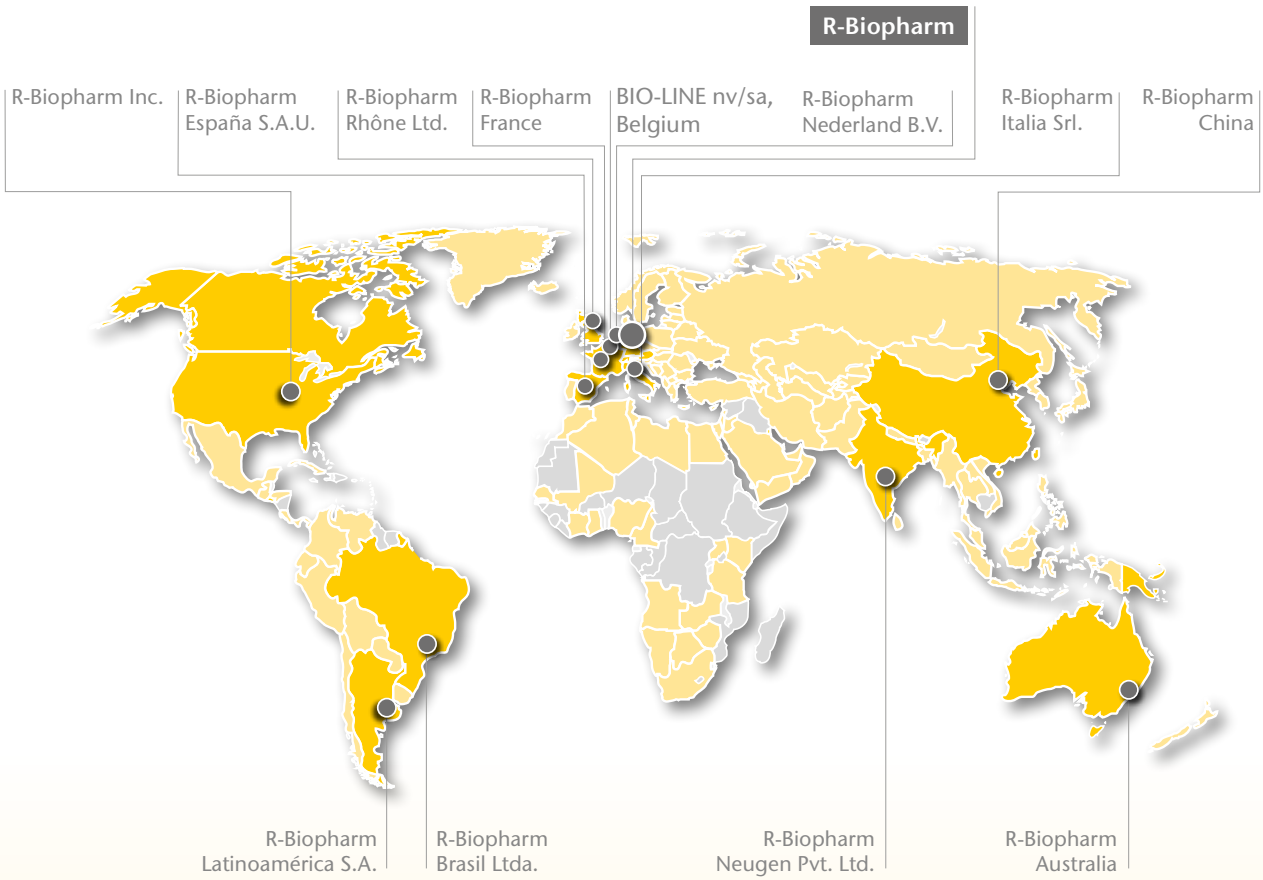
| Product | Description | No. of tests/amount | Art. No. |
|---|---|---|---|
| **Mycotoxin analysis (HPLC)** | **Immunoaffinity columns** | | |
| PBS-Tablets | Phosphate buffered saline tablets | 100 (suitable for 10 l) | RBRRP202 |
| Immunoaffinity Column Rack | Durable brass and PTFE rack allowing 6 samples to be processed at one time using Immunoaffinity columns | 1 unit | RBRCR1 |
| Immunoaffinity Column Accessory Pack | Glass barrels, syringes and adapters for use with all formats of RBR Immunoaffinity columns | 10 each | RBRAP01 |
| | **Aflatoxin analysis** | | |
| KOBRA® CELL | Electrochemical cell for derivatisation of aflatoxins B1 and G1 using HPLC | 1 unit | RBRK01 |
| KOBRA® CELL Membrane | Replacement membrane for the KOBRA® CELL | 1 unit | RBRK02 |
| KOBRA® CELL Installation Pack | Contains 5 metres of PEEK tubing, a tubing cutter, 10 ferrules and 3 unions | 1 unit | RBRK03 |
| Stainless steel electrode | Replacement stainless steel electrode for KOBRA® CELL | 1 unit | RBRK04 |
| Platinum working electrode | Replacement working electrode for KOBRA® CELL | 1 unit | RBRK05 |
| Power Pack | Replacement power pack for KOBRA® CELL | 1 unit | RBRK06 |
| P.T.F.E. Spacer | Replacement spacer 0.25 mm for KOBRA® CELL | 1 unit | RBRK07 |
| P.T.F.E. Spacer | Replacement spacer 0.1 mm for KOBRA® CELL | 1 unit | RBRK08 |
| P.T.F.E. Spacer | Replacement spacer 0.1 mm for KOBRA® CELL with reaction channel | 1 unit | RBRK09 |
| P.T.F.E. Spacer grid | Replacement spacer grid for KOBRA® CELL | 1 unit | RBRK10 |
| **PremiTest®** | | | |
| PremiTest® Starter Kit | Starterkit for Premi®Test, includes accessories | 1 set | ZPT-2000 |
| PremiTest® Multipress | Sampling device to squeeze 12 sample at once | 1 unit | ZPT-2012 |
| **Real-time PCR** | **SureFast®** | | |
| SureCycle® | Real-time PCR Kit for cycler verification (FAM & VIC/HEX) | 260 reactions | F4001 |
| SureFast® Animal+Plant Control 3plex | Extraction control | 100 reactions | F4053 |
| SureTaq® Hotstart Polymerase | Taq-Polymerase for 0.1 µL/reaction | 100 reactions | F4005 |
| SureTaq® Hotstart Polymerase II | Taq-Polymerase for 0.7 µL/reaction | 100 reactions | F4003 |
| SureCC | Color Compensation for multiplex application of SureFood®/SureFast® kits on LC480 | For 3 calibration runs | F4009 |
| SureCC | Color Compensation for multiplex application of SureFood®/SureFast® kits on LC2.0 and 1.5 | For 3 calibration runs | F4010 |

# Explanation

## International standardisation and regulation authorities

| | |
|---|---|
| **AACCI** | American Association of Cereal Chemists International |
| **AFNOR** | Association Française de Normalisation |
| **AOAC** | Association of Official Analytical Chemists<br><br>AOAC METHODS VALIDATION PROGRAMS:<br>• AOAC- RI Performance Tested Methods℠<br>• AOAC-OMA Official Methods℠<br>• AOAC-PTM Peer-Verified Methods℠ |
| **CEN** | Comité Européen de Normalisation |
| **Codex Alimentarius Commission** | The **Codex Alimentarius Commission**, established by FAO and WHO in 1963 develops harmonised international food standards and "**Codex Methods of Analysis**".<br>The methods are primarily intended as international methods for the verification of provisions in Codex standards. Definition of Codex types of methods of analysis:<br><br>(a) Defining Methods (Type I) e.g. R5 Mendez ELISA method<br>(b) Reference Methods (Type II)<br>(c) Alternative Approved Methods (Type III)<br>(d) Tentative Method (Type IV) |
| **FGIS** | Federal Grain Inspection Service |
| **GIPSA** | Grain Inspection, Packers and Stockyards Administration |
| **IDF** | International Dairy Federation |
| **IFU** | International Federation of Fruit Juice Producers |
| **ISO** | International Organisation for Standardization |
| **MicroVal** | European certification organisation for the validation and approval of alternative methods for the microbiological analysis of food and beverages |
| **OIV** | International Organization of Vine and Wine |

# The R-Biopharm Group – contact us

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# General terms & conditions of R-Biopharm AG

(Date of issue: October 2010)

**I. General provisions**

These General terms & conditions only are valid for entrepreneurs, legal entities under public law or public-law special assets (legal entities according to § 310 I German Civil Code (“Bürgerliches Gesetzbuch” -”BGB”). We deliver according to these General terms & conditions exclusively. They are deemed to have been acknowledged with the placing of an order or the receipt of the goods and shall also apply to all future business relationships, even if they are not explicitly agreed upon again. Deviating terms and conditions are not binding for us, even if we do not object to them explicitly.

**II. Orders and offer documents**

Our offers are subject to alteration. Decisive for the scope of our delivery obligation are our offer in writing respectively our written order confirmation. Deliverable are only the products which are contained in our current applicable price lists.

**III. Prices and conditions of payment/Withdrawal in case of default**

1. Purchase price is the price stated by us or - if no price has been stated - the price which is contained in our price list, which is in effect on the day of the order. The prices stated by us - unless otherwise stipulated in writing - are including packing and shipping costs, excluding VAT. The deduction of cash discounts shall not be granted. A small-quantity surcharge in the amount of 10 Euros can be charged for deliveries with a product value of up to 300 Euros (small quantity).
2. Payment obligations resulting from the delivery of goods are to be fulfilled within thirty (30) days of the invoice date by bank transfer exclusively and shall be deemed to have been effected only to the extent, to which we can dispose of them freely at a bank. For checks and bills of exchange, a processing fee of 30 Euros shall be charged; discounting and expenses shall be for the account of the Buyer.
3. The Buyer shall only be entitled to set-off with a counter-claim which is undisputed or has been determined by a final verdict. A right of retention the Buyer does only have as far as it is resulting from the same contractual relationship.
4. Should the Buyer be in default with due payments entirely or partly, the regulations of the statutory law are applicable. Interest in the amount of 8% above the basic interest rate (as it is published by the German Federal Bank) shall be due. We are reserving the right to claim any exceeding damage for delay.
5. In case of withdrawal, we are entitled - at the expense of the Buyer - to let the goods, which have been delivered by us, mark, store separately and collect. The Buyer - already yet - is declaring his consent that the persons who are commissioned with the collection are entitled to access the premises, on which the goods are, and enter them by car for this purpose.
6. In case of our withdrawal, we are not obliged to further deliveries any more, also regarding further future deliveries.

**IV. Retention of title**

1. We shall retain title to the goods delivered by us, until all the claims, to which we are entitled on whatever legal grounds arising from our business relationship with the Buyer, have been fully satisfied. Upon the Buyer’s request, we shall be obligated to release the securities in so far as their realizable value exceeds our claims by more than 10%. We reserve the right to select the items of collateral to be released.
2. The Buyer undertakes to only sell the goods, which are subject to retention, in his ordinary course of business, according to his usual terms and conditions of business and only as long as he is not in default with his payments. He is entitled to resell the goods, which are subject to retention, only on the condition that a transfer of the receivables, resulting from such a resale, to us takes place. He is not be entitled to dispose of the goods, which are subject to retention, in any another way (such as e. g. collateral assignment, pledging, leasing, lending, etc.). The Buyer is obligated to immediately notify us of any seizure or other interference by a third party, together with handing over of the documents which are necessary for an intervention.

**V. Delivery**

1. Our delivery times are generally only approximate and not binding.
2. Uncontrollable incidents, for which we are not responsible, e. g. natural phenomena, war, orders of the authorities, embargo, unexpected delays in the delivery of essential components and other materials (“Force Majeure”), shall prolong the delivery time reasonably. This also applies, if these incidents occur during a delay in delivery or at a sub-supplier. However, the delivery time shall be prolonged by a maximum period of two (2) months. Should we also not be able to deliver after this time, then the Buyer as well as we themselves are entitled to withdraw from the contract. Any claims of damages of the Buyer for this reason are excluded. Should we withdraw from the contract, we shall immediately refund the Buyer any and all payments possibly rendered for not yet delivered goods.
3. Should the Buyer - despite reminder - not fulfill his payment obligations resulting from existing contracts, we shall only supply on advance payment from then on.
4. We are entitled to partial deliveries to a reasonable extent; here each partial delivery can be invoiced separately. In case of order on call, the call-off has to take place at least two (2) calendar weeks prior to the desired delivery date.

**VI. Shipment and passing of risk**

1. Dispatch ex works or distribution warehouse shall be carried out at the expense of the Buyer. Shipping route and mode of dispatch shall be determined by us. We shall only be obligated to obtain a transport insurance, if explicitly instructed to do so by the Buyer in writing; the Buyer shall bear the costs for this insurance.
2. The passing of risk to the Buyer takes place as soon as the goods have been handed over to the haulage contractor respectively leave our factory or distribution warehouse for the purpose of dispatch; this also is valid, if we - by way of exception - organize additional services, e. g. carriage prepaid shipping, delivery to the premises of the Buyer, or similar. In particular we are not liable for alteration or deterioration of the goods during transport or resulting from improper storage. Should we have notified the Buyer that the goods are ready for dispatch or collection, the risk passes on to the Buyer, if he does not have the goods delivered or collect them, despite of us having set him a reasonable period of time for doing so; regarding that, the passing of risk takes place at the beginning of the day which follows the day, on which the deadline has expired.

**VII. Warranty/liability**

1. It is precondition for the execution of claims based on a defect, that the Buyer has performed his responsibilities to examine and complain according to § 377 of the German Commercial Code (“Handelsgesetzbuch” -”HGB”) correctly and completely.
2. We are liable for faultlessness of the goods corresponding to the state of the art. Features of samples and specimens as well as any statements regarding the condition of the goods, shall only be considered as an agreement on quality, if they explicitly have been agreed upon as determining the condition of the goods. Otherwise they are non-binding and do not free the Buyer from an own inspection of the goods concerning their suitability for his purposes. We neither grant guarantees with the content of a liability without fault nor any other kind of guarantees for quality and durability in the legal sense.
3. We are not liable for damages as far as they have been caused by improper storage of our products and/or their application contrary to the prescriptions - e. g. application after expiry of their shelf life or contrary to the direction for use - or as far as they have been caused by the Buyer in any other way.
4. The exceeding of use-by dates after the delivery does not entitle the Buyer to claims of any kind, but is deemed to be the usual condition. This is not the case, if the period between the date of delivery and the use-by date is less than four (4) calendar weeks.
5. We shall only be liable for damages, as far as we attributable have caused them by intent or gross negligence (disregard for the due care and attention to a very coarse extent); except in case of violation of essential contractual obligations (obligations, whose fulfillment enables the proper execution of the contract at all and on whose observance the contractual partner may rely regularly). In this last-mentioned case we are liable for each negligence with the restriction that - in case of violation of essential contractual duties by slight negligence - our liability is limited to the damage which typically is predictable.
6. Should we not have violated any essential contractual obligations in the sense mentioned before, we are not liable in cases of slight negligence. Unaffected by any limitation of liability contained in these General Terms & Conditions stay: Liability for intent, malice, initial inability, gross negligence, liability resulting from a guarantee (which, however, we generally not grant), bodily harms and other cases of legally compelling liability - in these cases the statutory law is valid (under exclusion of the Terms and Conditions of our contractual partner).
7. The regulations of this clause Warranty/Liability are valid for our contractual liability as well as liability resulting from tort (unaffected thereby stays the action for possession in case of tort, after statutory limitation has taken place, § 852 German Civil Code (“Bürgerliches Gesetzbuch” -BGB”)).
8. As far as our lability is excluded or limited, this shall also apply to the personal liability of our representatives, employees and vicarious agents and our liability for them.
9. As far as there is a defect of the goods, for which we are liable, the Buyer has to grant us the opportunity to execute subsequent performance within a term of generally two (2) calendar weeks, before the assertion of his further rights. In case that subsequent performance fails twice, in case of our refusal, or if subsequent performance is impossible, is delayed unreasonably or unreasonable for the Buyer due to other reasons, the Buyer may - according to his choice - execute his further legal rights, namely rescission or reduction of the purchase price and (regarding defects for which we are liable) claim of possibly occurred damages or compensation for possible futile expenditure, by which our liability is limited according to the preceding regulations.

**VIII. Burden of proof/export/effectiveness**

1. With none of the stipulations of these General terms & conditions an alteration of the burden of proof is intended.
2. We are not liable for the correctness of information regarding foreign-trade which we provide to our best conscience; it is the Buyer´s responsibility to assess the compliance with foreign-trade regulations with regard to our products himself.
3. Should any of the regulations of our General Terms & Conditions be ineffective and/or incomplete, the validity of the other regulations shall remain unaffected thereby.

**IX. Applicable law and place of jurisdiction**

1. The contractual relationship shall be governed by the laws of the Federal Republic of Germany, which shall be applicable supplementary. The UN-convention on contracts regarding the International Sale of Goods (CISG) shall not apply.
2. Exclusive Place of Jurisdiction is Darmstadt (Germany). However, we are entitled to file a lawsuit against the Buyer also at any other court, which does have jurisdiction regarding him according to the general regulations.

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