R-Biopharm AG

Product catalogue

Food & Feed Analysis

2017

Creative
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啟新生物科技

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Food & Feed Analysis

Content

Overview of test systems by R-Biopharm

ELISA – RIDASCREEN®

- Quantitative results
- Applications for many matrices
- Analysis by RIDA®SOFT Win
- Can be automated

LFD – RIDA®QUICK

- Immunochromatographic tests
- Applications for many matrices
- Visual evaluation (qualitative and semi-quantitative)
- Qualitative evaluation (analysis by RIDA®QUICK SCAN and RIDA®SMART APP)

Immunoaffinity columns – PREP®, EASI-EXTRACT®

- For sample preparation prior to analysis by HPLC, LC-MS/MS or ELISA
- Single and multiparameter
- High specificity
- For simple and complex matrices

Enzymatic analytics – Roche, Enzytec™, RIDA®CUBE

- UV-tests (reference methods)
- Tests for automation
- Single-use cartridge system

Real-time PCR – SureFood®/SureFast®

- Modular, open test systems
- DNA/RNA preparation, screening, identification, quantification
- Single and multiplex tests
- Suitable for all established thermal cyclers

Quality assurance – Trilogy®

- Standard materials for calibration (crystalline & liquid)
- Reference materials (naturally contaminated matrices)
- Materials for quality control
- RIDA® spiking solutions for validation

Ready to use culture medium systems – RIDA®STAMP, Compact Dry

- As proof of bacteria, yeasts and moulds
- For food samples and surface analysis
- Chromogenic proof systems for simple identification and enumeration of colonies

Equipment/automation

- Small automates for on site single testing
- Automates for 1 - 2 microtiter plates
- Evaluation with RIDA®SOFT Win

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 and 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.

The Enzytec™ *Color* line is a new product range for colorimetric assays. They are based on a chemical reaction with a chromogen in the visible range, without using any enzyme.

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

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™ *Fluid* or 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 the result after 15 minutes.

Enzymatic food analysis

"Yellow Line" Roche Diagnostics

Product	Description	No. of tests/amount	Art. No.
"Yellow Line" Roche Diagnostics	**Acids**		
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 of 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
"Yellow Line" Roche Diagnostics	**Sugars**		
D-Glucose	Enzymatic test (340 nm)	3 x 45 determinations	10716251035
D-Glucose/D-Fructose	Enzymatic test (340 nm)	27 determinations of each	10139106035
Lactose/D-Galactose	Enzymatic test (340 nm)	32 determinations	10176303035
Lactose/D-Glucose	Enzymatic test (340 nm)	32 determinations of each	10986119035
Maltose/Sucrose/D-Glucose	Enzymatic test (340 nm)	15 determinations of each	11113950035
Raffinose	Enzymatic test (340 nm)	32 determinations	10428167035
Sucrose/D-Glucose	Enzymatic test (340 nm)	22 determinations of each	10139041035
Sucrose/D-Glucose/D-Fructose	Enzymatic test (340 nm)	22 determinations of each	10716260035
Starch	Enzymatic test (340 nm)	27 determinations	10207748035
"Yellow Line" Roche Diagnostics	**Others**		
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 of 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
"Yellow Line" Roche Diagnostics	**Accessories**		
Cuvettes Holder		1	10019624035
Plastic Spatulas		500 pcs.	10019623035

Enzytec™ *Color*

Product	Description	No. of tests/amount	Art. No.
Enzytec™ *Color*	**Test kits**		
Copper	Colorimeric test (580 nm)	2 x 50 ml	E2400
Iron	Colorimeric test (580 nm)	4 x 100 ml	E2300
GlucaTest®S125 GlucaTest®L500	Colorimeric test (550 nm)	125 ml (40 tests) 4 x 125 ml (160 tests)	E3500 E3550
Free sulfite	Colorimeric test (340 nm)	2 x 100 ml	E3300
Total sulfite	Colorimeric test (340 nm)	2 x 100 ml	E3200
Tartaric acid	Colorimeric test (520 nm)	2 x 80 ml	E3100

Enzytec™ *Fluid*

Enzytec™ *Fluid*	**Acids**		
Acetic acid	Enzymatic test (340 nm)	For automation only	E5226
D-Lactic acid	Enzymatic test (340 nm)	4 x 10 determinations	E5240
L-Lactic acid	Enzymatic test (340 nm)	4 x 10 determinations	E5260
L-Malic acid	Enzymatic test (340 nm)	4 x 10 determinations	E5280
Enzytec™ *Fluid*	**Sugars**		
D-Fructose	Enzymatic test (340 nm)	4 x 10 determinations	E5120
D-Glucose	Enzymatic test (340 nm)	4 x 10 determinations	E5140
Glucose/Fructose	Enzymatic test (340 nm)	4 x 10 determinations	E5160
Sucrose (via Glucose)	Enzymatic test (340 nm)	4 x 10 determinations	E5180
Enzytec™ *Fluid*	**Others**		
Ammonia	Enzymatic test (340 nm)	4 x 10 determinations	E5390
Ethanol	Enzymatic test (340 nm)	4 x 10 determinations	E5340
Glycerol	Enzymatic test (340 nm)	4 x 10 determinations	E5360
Enzytec™ *Fluid*	**Standards**		
Alcohol Standard	Alcohol assay control solution	10 x 1 ml	E5420
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

Enzymatic food analysis

Enzytec™ *Generic*

Product	Description	No. of tests/amount	Art. No.
Enzytec™ *Generic*	**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
Sample purifier	Sample preparation for Enzymatic tests	20 samples	E2250
Enzytec™ *Generic*	**Sugars**		
D-Glucose	Enzymatic test (340 nm)	32 determinations	E1210
D-Glucose/D-Fructose	Enzymatic test (340 nm)	32 determinations of 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 of each	E1246
Sucrose/D-Glucose/D-Fructose	Enzymatic test (340 nm)	16 determinations of each	E1247
Glucose remover	For removal of glucose excess in samples	32	E3400
Enzytec™ *Generic*	**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
Sugar Standard manual	Multi-sugar assay control solution	9 ml	E1242

Enzytec™ *Liquid*

Enzytec™ *Liquid*	**Acids**		
Acetic acid	Enzymatic test (340 nm)	For automation only	E8226
D-/L-Lactic acid	Enzymatic test (340 nm)	2 x 25 determinations	E8240
Lactic acid	Enzymatic test (340 nm)	2 x 25 determinations	E8260
Malic acid	Enzymatic test (340 nm)	2 x 25 determinations	E8280
Enzytec™ *Liquid*	**Sugars**		
D-Glucose	Enzymatic test (340 nm)	2 x 25 determinations	E8140
D-Glucose/D-Fructose	Enzymatic test (340 nm)	2 x 25 determinations	E8160
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
Enzytec™ *Liquid*	**Others**		
Ethanol	Enzymatic test (340 nm)	2 x 25 determinations	E8340

RIDA®CUBE (only for RIDA®CUBE SCAN*)

Product	Description	No. of tests/amount	Art. No.
RIDA®CUBE	**Ready to use cartridges**		
Acetic acid	Enzymatic test only with RIDA®CUBE SCAN (340 nm)	32 determinations	RCS4226
Ethanol	Enzymatic test only with RIDA®CUBE SCAN (340 nm)	32 determinations	RCS4340
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
DL-Lactic (without differenciation)	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
SO_2-Free (Free Sulfite)	Enzymatic test only with RIDA®CUBE SCAN (340 nm)	32 determinations	RCS4610
SO_2-Total (Total Sulfite)	Enzymatic test only with RIDA®CUBE SCAN (340 nm)	32 determinations	RCS4600
Sucrose/D-Glucose	Enzymatic test only with RIDA®CUBE SCAN (340 nm)	32 determinations	RCS4180

* See page 76 – • Equipment/software/accessories.

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 analysing water soluble vitamins: ELISA, immuno-affinity columns (IAC), microbiological and enzymatic microtiter plate tests. The new developed 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 and biotin 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 (IAC), you can determine the total vitamin content. With the EASI-EXTRACT® FOLIC ACID (IAC) 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 analysed
- 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
- Single peaks

RIDASCREEN®
ELISA

- Determination of total vitamin B12 content
- Determination of added vitamin (folic acid , biotin)
- 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) 50 columns (3 ml format)	RBRP80 RBRP80B
EASI-EXTRACT® VITAMIN B12 (LGE) AOAC „First 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) 50 columns (10 ml format)	RBRP88 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) 50 columns (3 ml format)	RBRP81 RBRP81B
EASI-EXTRACT® BIOTIN	Immunoaffinity columns for sample clean-up prior to the analysis of biotin using HPLC or LC-MS/MS	10 columns (3 ml format) 50 columns (3 ml format)	RBRP82 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) 50 columns (10 ml format)	RBRP183 RBRP183B

RIDASCREEN®

	ELISA microtiter plates		
RIDASCREEN®FAST Vitamin B12	Enzyme immunoassay for quantitative analysis of total vitamin B12 in fortified food and vitamin products Limit of detection: 0.5 µg/kg	48 determinations Incubation time: 25 min	R2103
RIDASCREEN® Biotin	Enzyme binding assay for quantitative analysis of biotin in fortified food and vitamin products Detection limit: 0.37 - 5.5 µg/kg depending on matrix	96 determinations Incubation time: 1 hr 30 min	R2201
RIDASCREEN®FAST Folsäure (Folic Acid)	Enzyme immunoassay for quantitative analysis of added folic acid in fortified food and vitamin products Limit of detection: 0.5 µg/kg	48 determinations Incubation time: 25 min	R3203

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 (MLs) 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 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 determination of mycotoxins, semi-quantitative (visual evaluation) or quantitative (evaluation with RIDA®QUICK SCAN reader or RIDA®SMART APP software).
- Test cards, AFLACARD und 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 are Solid phase columns for the purification of mycotoxin contaminated samples prior to chromatographic analysis.

RIDA®QUICK

Lateral flow assay

- Semi-quantitative or quantitative analysis
- Fast and reliable

New: Smartphone-based evaluation of all quantitative tests with RIDA®SMART APP

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

Clean-up columns

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* Detection limit: 5 ng/kg (milk/reconst. milk powder), 50 ng/kg (milk powder)	96 determinations Incubation time: 1 hr 15 min	R1121
RIDASCREEN®FAST Aflatoxin M1	Enzyme immunoassay for quantitative determination of aflatoxin M1 in milk and milk powder Detection limit: < 125 ng/kg	48 determinations Incubation time: 15 min	R5812
RIDASCREEN® Aflatoxin B1 30/15	Enzyme immunoassay for quantitative determination of aflatoxin B1 in cereals and feed Detection limit: 1 µg/kg (cereals), 1.7 µg/kg (soy), 2 µg/kg (dry cat food), 4 µg/kg (feed)	96 determinations Incubation time: 45 min	R1211
RIDASCREEN® Aflatoxin Total	Enzyme immunoassay for quantitative determination of total aflatoxin in cereals and feed* Detection limit: 1.75 µg/kg	96 determinations Incubation time: 45 min	R4701
RIDASCREEN®FAST Aflatoxin	Enzyme immunoassay for quantitative determination of aflatoxins in cereals and feed* Detection limit: 1.7 µg/kg	48 determinations Incubation time: 15 min	R5202
RIDASCREEN®FAST Aflatoxin SC GIPSA/FGIS 2016-085	Enzyme immunoassay for quantitative determination of aflatoxins in cereals and feed Detection limit: 2 µg/kg	48 determinations 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	50 columns (1 ml format)	RBRP07
AFLAPREP® M	Immunoaffinity columns for sample clean-up prior to the analysis of aflatoxin M1 using HPLC or LC-MS/MS	25 columns (1 ml format)	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) 50 columns (3 ml format)	RBRP124 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) 50 columns (3 ml format)	RBRRP71 RBRRP70N
RIDA® Aflatoxin column	Immunoaffinity columns for sample clean-up prior to ELISA	10 columns (1 ml format) 50 columns (1 ml format)	R5001 R5002
	Solid phase column		
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

* Further applications on request.

Mycotoxins

Aflatoxins

Product	Description	No. of tests/amount	Art. No.
	Test strips		
RIDA®QUICK Aflatoxin	Immunochromatographic test for the semi-quantitative determination (visual evaluation) of aflatoxin in cereals, soy flour, nuts, pistachios, coconut flour, sunflower seeds, figs, dates and cashew nuts Detection limit: 4, 10, 20 µg/kg	20 strips Incubation time: 4 - 16 min	R5204
RIDA®QUICK Aflatoxin RQS FGIS/GIPSA 2013-048	Immunochromatographic test for the quantitative determination of aflatoxin in corn* in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software (page 77, Equipment/Accessories) Detection limit: 4 µg/kg	20 strips Incubation time: 5 min	R5205
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 (page 77, Equipment/Accessories) Detection limit: 4 µg/kg	20 stripes Incubation time: 5 min	R5206
	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

Ochratoxin A

	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: 5 µg/kg	48 determinations Incubation time: 15 min	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
	Solid phase column		
OCHRATOXIN CLEAN-UP COLUMNS	Solid phase column for sample clean-up of specific matrices in conjunction with OCHRACARD	50 columns (syringe format)	RBRP13
	Test cards		
OCHRACARD	Qualitative detection of ochratoxin A at various screening levels	20 determinations + 20 Immunoaffinity columns	RBRP48

* Further applications on request.

Mycotoxins

Zearalenone

Product	Description	No. of tests/amount	Art. No.
	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 (page 77, Equipment/ Accessories) Detection limit: 75µg/kg (RIDA®QUICK SCAN), 50 µg/kg (RIDA®SMART APP)	20 strips Incubation time: 5 min	R5504

DON (Vomitoxin)

	ELISA microtiter plates		
RIDASCREEN® DON	Enzyme immunoassay for quantitative determination of deoxynivalenol in cereals, malt, feed, beer and wort Detection limits: 18.5 µg/kg (cereals/malt/feed) and 3.7 µg/kg (beer/wort)	96 determinations Incubation time: 45 min	R5906
RIDASCREEN®FAST DON AOAC RI 000701 & GIPSA/FGIS 2002-105	Enzyme immunoassay for quantitative determination of DON in cereals, malt and feed Detection limit: < 0.2 mg/kg	96 determinations 48 determinations Incubation time: 8 min	R5901 R5902
RIDASCREEN®FAST DON SC GIPSA/FGIS 2014-052	Enzyme immunoassay for quantitative determination of DON in cereals, malt and feed Detection limit: 0.074 mg/kg	48 determinations 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) 50 columns (3 ml format)	RBRP50 RBRP50B
	Test strips		
RIDA®QUICK DON	Immunochromatographic test for the determination of DON in grain: semi-quantitative (visual evaluation) or quantitative (evaluation with RIDA®QUICK SCAN reader or RIDA®SMART APP software, page 77, Equipment/Accessories) Detection limit: 0.5 mg/kg	20 strips Incubation time: 5 min	R5904

Mycotoxins

Fumonisins

Product	Description	No. of tests/amount	Art. No.
	ELISA microtiter plates		
RIDASCREEN® Fumonisin	Enzyme immunoassay for quantitative analysis of fumonisins in corn and corn products Detection limit: 25 µg/kg	96 determinations Incubation time: 45 min	R3401
RIDASCREEN®FAST Fumonisin GIPSA/FGIS 2016-081	Enzyme immunoassay for quantitative determination of fumonisins in cereals and feed Detection limit: 0.222 mg/kg	48 determinations 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	25 columns (3 ml format)	RBRP31
	Test strips		
RIDA®QUICK Fumonisin RQS	Immunochromatographic test for the quantitative determination of fumonisin in corn in combination with RIDA®QUICK SCAN reader or RIDA®SMART APP software (page 77, Equipment/ Accessories) Detection limit: 0.3 mg/kg	20 strips Incubation time: 5 min	R5606

T-2 Toxin

	ELISA microtiter plates		
RIDASCREEN® T-2 Toxin	Enzyme immunoassay for quantitative determination of T-2 toxin in cereals and feed Detection limit: < 5 µg/kg	96 determinations 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 Detection limit: < 20 µg/kg	48 determinations 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 Detection limit: 16 µg/kg (oats), 12 µg/kg (corn), 21 µg/kg (wheat), 33 µg/kg (barley)	96 determinations Incubation time: 45 min	R3805
	Immunoaffinity columns		
EASI-EXTRACT® T-2 & HT-2	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) 50 columns (3 ml format)	RBRP43 RBRP43B
	Test strips		
RIDA®QUICK T-2 / HT-2 RQS	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 (page 77, Equipment/ Accessories) Detection limit: 50 µg/kg	20 strips Incubation time: 5 min	R5304

Mycotoxins

Citrinin

Product	Description	No. of tests/amount	Art. No.
	ELISA microtiter plates		
RIDASCREEN®FAST Citrinin	Enzyme immunoassay for quantitative determination of citrinin in cereals and feed Detection limit: 15 µg/kg	48 determinations 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	25 columns (3 ml format)	RBRP126

Multi Toxin

	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) 50 columns (1 ml format)	RBRP73 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) 50 columns (1 ml format)	RBRP89 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) 50 columns (3 ml format)	RBRP115 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) 50 columns (3 ml format)	RBRP112 RBRP112B
	Solid phase columns		
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 (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 (syringe format)	TC-MT3000

Trichothecene

	Solid phase columns		
Trichothecene P columns	Solid phase column for sample clean-up prior to the analysis of trichothecenes using GC or LC-MS/MS	30 columns (test tube format)	RBRP51
PuriTox Trichothecene	Solid phase column for clean-up prior to the analysis of trichothecenes using GC or LC-MS/MS	25 columns (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 (gravity flow format)	TC-C210

Patulin

Product	Description	No. of tests/amount	Art. No.
	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	10 columns (3 ml format) 50 columns (3 ml format)	RBRP250 RBRP250B

Sterigmatocystin

	Immunoaffinity columns		
EASI-EXTRACT® STERIGMATOCYSTIN	Immunoaffinity columns for sample clean-up prior to the analysis of sterigmatocystin using HPLC	10 columns (3 ml format) 50 columns (3 ml format)	RBRP125 RBRP125B

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 12 samples 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

Mycotoxins

Automated online analysis

Product	Description	No. of tests/amount	Art. No.
Aflatoxin	**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 96 cartridges	RBRP900/48 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 96 cartridges	RBRP904/48 RBRP904
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 96 cartridges	RBRP901/48 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 96 cartridges	RBRP902/48 RBRP902

Trilogy® certified mycotoxin reference materials and mycotoxin standards

Trilogy® Analytical Laboratory offers certified reference materials for the quality assurance of mycotoxin analysis. Trilogy® certified mycotoxin reference materials are naturally contaminated homogeneous products that have been certified to contain a specific concentration of one or more mycotoxins.

These reference materials have various applications including daily quality assurance, technician training, troubleshooting, proficiency testing, quality documentation and method validation. Reference materials are available containing the major mycotoxins in various matrices and levels of contamination: Aflatoxin, Ochratoxin, Zearalenone, Deoxynivalenol and Fumonisin contaminated material are available, as well as multi-toxin containing reference materials. Commodities include corn and corn by-products, wheat and wheat products, barley and malted barley, oats, rice and coffee as well as complex products like animal feed. Samples are available in 100 g, 500 g and 1 kg re-sealable foil packs.

Trilogy® also provides a wide range of analytical standards for over 30 different mycotoxins, both in solvents and in dry form. The Trilogy® 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. The Trilogy® dried standards are very easy to use. A simple reconstitution step reduces the need to handle hazardous mycotoxin powders.

The Trilogy® 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/LC-MS/MS determination of mycotoxins with minimal preparation and effort. Shelf life for both types of mycotoxin standards is typically

12 months after production; in addition to that the Trilogy® dried standards have a 6 months shelf life after reconstitution.

Trilogy® certified Mycotoxin reference material

- Naturally contaminated materials
- Single and multi-toxins
- Cereal, complex materials such as feed

Trilogy® mycotoxin standard substances

- Dried standard substances
- Ready-to-use standards
- Single toxin and toxin groups

Mycotoxins

Mycotoxin standards

Product	Description	No. of tests/amount	Art. No.
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 after reconstitution	TS-108
Trilogy® Dried Standard Aflatoxin B1	Aflatoxin B-1	25 µg/ml after reconstitution	TS-104
Trilogy® Dried Standard Aflatoxin B2	Aflatoxin B-2	25 µg/ml after reconstitution	TS-105
Trilogy® Dried Standard Aflatoxin G1	Aflatoxin G-1	25 µg/ml after reconstitution	TS-106
Trilogy® Dried Standard Aflatoxin G2	Aflatoxin G-2	25 µg/ml after reconstitution	TS-107
Trilogy® Dried Standard Aflatoxin M1	Aflatoxin M1	1 µg/ml after reconstitution	TS-130
	liquid		
Trilogy® Liquid Standard Aflatoxin 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
AFLASTANDARD	Total aflatoxin standard (B1, B2, G1, G2) solution at 1000 ng/ml (250 ng/ml each) in methanol	6 ml 3 ml	RBRP22 RBRP22A
Trilogy® Liquid Standard Aflatoxin B1	Aflatoxin B1; 25 µg/ml in acetonitrile	10 ml	TSL-104
Trilogy® Liquid Standard Aflatoxin B2	Aflatoxin B2; 25 µg/ml in acetonitrile	10 ml	TSL-105
Trilogy® Liquid Standard Aflatoxin G1	Aflatoxin G1; 25 µg/ml in acetonitrile	10 ml	TSL-106
Trilogy® Liquid Standard Aflatoxin G2	Aflatoxin G2; 25 µg/ml in acetonitrile	10 ml	TSL-107
Trilogy® Liquid Standard Aflatoxin M1	Aflatoxin M1; 0.5 µg/ml in acetonitrile	2 ml	TSL-143
M1 STANDARD	Aflatoxin M1 standard solution at a concentration of 1000 ng/ml in acetonitrile	6 ml	RBRP42
Ochratoxin A	**dried**		
Trilogy® Dried Standard Ochratoxin A	Ochratoxin A	1 µg/ml after reconstitution	TS-503
	liquid		
Trilogy® Liquid Standard Ochratoxin	Ochratoxin A; 10 µg/ml in methanol	5 ml	TSL-504
OCHRASTANDARD	Ochratoxin A standard solution at a concentration of 1000 ng/ml in methanol	6 ml 3 ml	RBRP11 RBRP11A

Mycotoxin standards

Product	Description	No. of tests/amount	Art. No.
Zearalenone	**dried**		
Trilogy® Dried Standard Zearalenon	Zearalenone	25 µg/ml after reconstitution	TS-401
	liquid		
Trilogy® Liquid Standard Zearalenon	Zearalenone; 25 µg/ml in methanol	10 ml	TSL-401
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 after reconstitution	TS-316
DON (Vomitoxin)	**dried**		
Trilogy® Dried Standard DON	Deoxynivalenol	50 µg/ml after reconstitution	TS-310
Trilogy® Dried Standard Deoxynivalenol (DON)	Deoxynivalenol (DON)	100 µg/ml after reconstitution	TS-317
Trilogy® Dried Standard 3-Acetyl Deoxynivalenol	3-Acetyl Deoxynivalenol	100 µg/ml after reconstitution	TS-342
Trilogy® Dried Standard 15-Acetyl Deoxynivalenol	15-Acetyl Deoxynivalenol	100 µg/ml after reconstitution	TS-343
	liquid		
Trilogy® Liquid Standard Deoxynivalenol (DON)	Deoxynivalenol (DON); 100 µg/ml in methanol	10 ml	TSL-317
Fusarenon X	**dried**		
Trilogy® Dried Standard Fusarenon X	Fusarenon X	100 µg/ml after reconstitution	TS-351
Fumonisins	**dried**		
Trilogy® Dried Standard Fumonisin B1, B2	Fumonisin B1, Fumonisin B2 (10:3)	100/30 µg/ml after reconstitution	TS-202
	liquid		
Trilogy® Liquid Standard Fumonisin B1, B2	Fumonisin B1, Fumonisin B2 100 µg/ml Fumonisin B1, 30 µg/ml Fumonisin B2 in acetonitrile/water (50/50)	2 ml	TSL-202
Trilogy® Liquid Standard Fumonisin B1	Fumonisin B1; 100 µg/ml in acetonitrile/water (50/50)	5 ml	TSL-204
Trilogy® Liquid Standard Fumonisin B2	Fumonisin B2; 100 µg/ml in acetonitrile/water (50/50)	2 ml	TSL-205
Neosolaniol	**dried**		
Trilogy® Dried Standard Neosolaniol	Neosolaniol	100 µg/ml after reconstitution	TS-328
Nivalenol	**dried**		
Trilogy® Dried Standard Nivalenol	Nivalenol	100 µg/ml after reconstitution	TS-344

Mycotoxins

Mycotoxin standards

Product	Description	No. of tests/amount	Art. No.
T-2/HT-2	**dried**		
Trilogy® Dried Standard T-2 Toxin	T-2 Toxin	100 µg/ml after reconstitution	TS-314
Trilogy® Dried Standard HT-2 Toxin	HT-2 Toxin	100 µg/ml after reconstitution	TS-333
	liquid		
Trilogy® Liquid Standard T-2 Toxin	T-2 Toxin; 100 µg/ml in acetonitrile	5 ml	TSL-314
Trilogy® Liquid Standard HT-2 Toxin	HT-2 Toxin; 100 µg/ml in acetonitrile	5 ml	TSL-333
Trichotehecenes - Multitoxins	**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
	dried		
Trilogy® Dried Standard Type A Trichothecenes	Type A Trichothecenes (Diacetoxyscirpenol, HT-2 Toxin, T-2 Toxin, Neosolaniol)	10 µg/ml after reconstitution	TS-353
Trilogy® Dried Standard Type B Trichothecenes	Type B Trichothecenes (Fusarenon X, Deoxynivalenol, 3- & 15-Acetyl DON, Nivalenol)	10 µg/ml after reconstitution	TS-354
Citrinin	**dried**		
Trilogy® Dried Standard Citrinin	Citrinin	5 µg/ml after reconstitution	TS-904
Cyclopiazonic acid	**dried**		
Trilogy® Dried Standard Cyclopiazonic Acid	Cyclopiazonic acid	10 µg/ml after reconstitution	TS-802
Patulin	**liquid**		
Trilogy® Liquid Standard Patulin	Patulin; 25 µg/ml in acetonitrile	5 ml	TSL-601

Mycotoxins

Reference material for mycotoxin analysis

Product	Description	No. of tests/amount	Art. No.
Reference material	**Food or feed product**		
Trilogy® Certified Reference Material Aflatoxin	Commodities available upon request	100 gram 500 gram 1000 gram	TR-A100 TR-A500 TR-A1000
Trilogy® Certified Reference Material Ochratoxin	Commodities available upon request	100 gram 500 gram 1000 gram	TR-O100 TR-O500 TR-O1000
Trilogy® Certified Reference Material Zearalenon	Commodities available upon request	100 gram 500 gram 1000 gram	TR-Z100 TR-Z500 TR-Z1000
Trilogy® Certified Reference Material Deoxynivalenol	Commodities available upon request	100 gram 500 gram 1000 gram	TR-D100 TR-D500 TR-D1000
Trilogy® Certified Reference Material Fumonisin	Commodities available upon request	100 gram 500 gram 1000 gram	TR-F100 TR-F500 TR-F1000
Trilogy® Certified Reference Material Multitoxin	Commodities and mycotoxins available upon request	100 gram 500 gram 1000 gram	TR-MT100 TR-MT500 TR-MT1000
Trilogy® Certified Reference Material Complex commodities; Single & Multitoxin	Commodities and mycotoxins available upon request	100 gram 500 gram 1000 gram	TR-CC100 TR-CC500 TR-CC1000

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 hormonal 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®

- ELISAs for the most commonly used hormones and anabolics
- Quantitative Screening
- Applications for many matrices
- Evaluation with RIDA®SOFT Win

Hormones & Anabolics

Product	Description	No. of tests/amount	Art. No.
β-Agonists	**ELISA microtiter plates**		
RIDASCREEN® β-Agonists	Enzyme immunoassay for quantitative analysis of β-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 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 Incubation time: 1 hr	R1711
RIDA® β-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 Incubation time: 1 hr 30 min	R9901
RIDA® Ractopamin Spiking Solution	10 ng/ml	1 ml	R9999
Stilbenes	**ELISA microtiter plates**		
RIDASCREEN® DES	Enzyme immunoassay for quantitative analysis of DES in urine (200 ng/l), meat/feces (100 ng/kg), bile (2 µg/l), *	96 determinations Incubation time: over night and 1 hr 30 min	R2701
RIDA® DES Spiking Solution	10 ng/ml	1 ml	R2799
DES Assay Control (positive)	Freeze-dried calves urine positive for DES	1 x 5 ml	R2707
DES Assay Control (negative)	Freeze-dried calves urine negative for DES	1 x 5 ml	R2708
Sex hormones	**ELISA microtiter plates**		
RIDASCREEN® 17β-Östradiol	Enzyme immunoassay for quantitative analysis of 17 β-estradiol in bovine plasma (20 ng/l), *	96 determinations Incubation time: 2 hrs 30 min	R2301
RIDA® 17β-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 Incubation time: 2 hrs 30 min	R2401
RIDA® Testosteron Spiking Solution	500 ng/ml	1 ml	R2499

* Further applications on request.

Hormones & anabolics

Product	Description	No. of tests/amount	Art. No.
Gestagens	**ELISA microtiter plates**		
RIDASCREEN® Acetylgestagene	Enzyme immunoassay for quantitative analysis of medroxyprogesterone acetate in bovine perirenal fat (300 ng/kg)	96 determinations Incubation time: 2 hrs 30 min	R1801
RIDA® Acetylgestagene Spiking Solution	100 ng/ml medroxyprogesterone acetate	1 ml	R1899
RIDASCREEN® Melengestrolacetat	Enzyme immunoassay for quantitative analysis of melengestrolacetate in bovine renal fat (300 ng/kg), meat (75 ng/kg)	96 determinations Incubation time: 2 hrs 30 min	R6502
RIDA® Melengestrolacetat Spiking Solution	100 ng/ml	1 ml	R6599
Anabolic steroids	**ELISA microtiter plates**		
RIDASCREEN® Trenbolon	Enzyme immunoassay for quantitative analysis of trenbolone in urine (400 ng/l), bile (1 µg/l), meat/liver (200 ng/kg), feces (25 ng/kg), *	96 determinations Incubation time: 2 hrs 30 min	R2601
RIDA® Trenbolon Spiking Solution	50 ng/ml	1 ml	R2699
Trenbolone Assay Control (negative)	Freeze-dried calves urine negative for trenbolone	1 x 5 ml	R2608
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 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 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 Incubation time: 2 hrs 30 min	R2511
RIDA® Ethinylöstradiol Spiking Solution	20 ng/ml	1 ml	R2599
Non-steroidal compounds	**ELISA microtiter plates**		
RIDASCREEN® Zeranol	Enzyme immunoassay for quantitative analysis of zeranol in urine (1.5 µg/l), *	96 determinations Incubation time: 1 hr 15 min	R3301
RIDA® Zeranol Spiking Solution	20 ng/ml	1 ml	R3399
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.

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 biotechnological industries, antibiotic residues bear additionally a technological and economic risk, as they can inhibit production processes involving microorganisms and thus lead to production losses.

RIDASCREEN®

ELISAs for qualitative screening

- Quantitative results of single antibiotics or antibiotic groups
- Detects the most commonly used antibiotics
- Applications for a wide range of matrices
- Evaluation with RIDA®SOFT Win

EASI-EXTRACT®/RIDA®

Immunoaffinity columns for sample clean-up

- For ELISA, HPLC or LC-MS/MS-analysis
- For complex matrices such as honey
- Reduced interferences
- Excellent recovery

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 (25 ng/kg), joghurt/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 Incubation time: 45 min	R1511
RIDA® Chloramphenicol Spiking Solution	50 ng/ml	1 ml	R1599
Fenicols	**Immunoaffinity columns**		
EASI-EXTRACT® CHLORAMPHENICOL	Immunoaffinity columns for sample clean-up prior to the analysis of chloramphenicol using HPLC or LC-MS/MS	10 columns (3 ml format) 50 columns (3 ml format)	RBRP300 RBRP300B
Tetracyclins	**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 Incubation time: 1 hr 30 min	R3505
RIDA® Tetracyclin Spiking Solution	Lyophilisate, produces 10 ml of a 100 ng/ml stock solution	1 lyophilisate, 1 reconstitution buffer	R3599
β-Lactame	**ELISA microtiter plates**		
RIDASCREEN® Penicillin	Enzyme immunoassay for quantitative analysis of penicillins milk (0.2 µg/l), cheese/butter/yoghurt/curd/cream/sour cream/kefir/whey (0.9 - 2.1 µg/l or µg/kg), infant formula (0.3 µg/l), serum (0.4 µg/l), meat (2.6 µg/kg)	96 determinations Incubation time: 1 hr 30 min	R2921

Antibiotics

Product	Description	No. of tests/amount	Art. No.
Nitrofurans	**ELISA microtiter plates**		
RIDASCREEN® Nitrofuran (AOZ)	Enzyme immunoassay for quantitative analysis of AOZ in shrimp/fish/milk (50 ng/kg), meat/liver/whole egg/honey (100 ng/kg), *	96 determinations 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 shrimp/meat/liver/fish/whole egg (200 ng/kg), *	96 determinations Incubation time: 1 hr 15 min	R3711
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 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 Incubation time: 1 hr 15 min	R3715
RIDA® Nitrofuran (SEM) Spiking Solution	20 ng/ml	1 ml	R3797
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 Incubation time: 1 hr 15 min	R3103
RIDA® Streptomycin Spiking Solution	10 µg/ml	1 ml	R3199
Sulfonamides	**ELISA microtiter plates**		
RIDASCREEN® Sulfamethazin	Enzyme immunoassay for quantitative analysis of sulfamethazine in milk (4 µg/l), meat/kidney (18 µg/kg), *	96 determinations Incubation time: 2 hrs 30 min	R3001
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/shrimps/honey (2 µg/kg), milk (3.5 µg/l)	96 determinations 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	**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 Incubation time: 1 hr 15 min	R3113
RIDA® Ciprofloxacin Spiking Solution	1 µg/ml	1 ml	R3198
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)	96 determinations Incubation time: 1 h 30 min	R2901
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 Detectable antibiotic groups: β-lactams, cephalosporins, macrolides, tetracyclins, sulphonamides, aminoglycosides, quinolones, polypeptides, fenicols, others	4 x 25 ampoules 25 ampoules Incubation time: 3 hrs	R3900 R3925
Premi®Test	**Reagent**		
Premi®Test Urin	Reagent for the preparation of bovine and porcine urine samples for the screening of antibiotic residues with Premi®Test	1 dropper bottle containing 15 ml, sufficient for 30 samples with a sample volume of 30 ml each	R3921

* Further applications on request.

Phycotoxins

Product	Description	No. of tests/amount	Art. No.
	ELISA microtiter plates		
RIDASCREEN® FAST PSP SC	Enzymimmunoassay for quanitative analysis of saxitoxin and related algae toxins in mussels; Detection limit: 50 µg/kg	48 determinations Incubation time: 30 min	R1905

Food adulteration

	ELISA microtiter plates		
RIDASCREEN® CIS	Enzyme immunoassay for the analysis of cow's milk (bovine IgG) in sheep and goat's milk and cheese; Detection limit: 0.1 % (cow's milk in sheep/goat's milk/ cheese)	48 determinations Incubation time: 1 hr 30 min	R4302
	Test strips		
RIDA®QUICK CIS	Immunochromatographic test for the detection of cow's milk (bovine IgG) in milk or cheese of other species; Detection limit: 0.5 % (cow's milk in sheep/goat's milk/ cheese)	25 strips Incubation time: 5 min	R4303
DUROTEST® S	Membrane strips for detection of non-durum wheat adulteration in semolina Detection limit: 3 % non-durum wheat.	20 strips (80 determinations)	RBRP10
	Solid phase column		
MELAMINE CLEAN-UP COLUMN	Solid phase column for sample clean-up prior to the analysis of melanine using HPLC or LC-MS/MS Detection limit: 15.625 ng/ml melamine	25 columns	RBRP111

Histamine

Histamine	Enzymatic test microtiter plates		
RIDASCREEN® Histamine (enzymatic)	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) Detection limit: 0.75 - 3.75 mg/kg (ppm) histamine depending on matrix	96 determinations Incubation time: 15 min	R1605
	Accessories		
RIDA® Sample Decolorant	Reagents for the sample extraction of wine for histamine analysis	1 Set (200 wine samples)	R1699
	ELISA microtiter plates		
RIDASCREEN® Histamin	Competitive ELISA to quantify histamine in food; Detection limit: 0.1 - 100 mg/kg histamine depending on matrix	96 determinations 48 determinations Incubation time: 1 hr 15 min	R1601 R1604
	Colorimetric assay for quantitative analysis		
RIDA®QUICK Histamin	Colorimetric assay to quantify histamine in fish meal and fresh fish Detection limit: 0.1 - 100 mg/kg histamine depending on matrix	48 determinations Incubation time: 5 min	R1603

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. 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 an ELISA and LFD detect proteins; PCR detects DNA. These methods are complementary and can be used for confirmation of screening results. The unique multiplex real-time PCR allows the detection of 3 parameters plus internal amplification control in one run.

bioavid/RIDA®QUICK

- On-site testing (swab test, food)
- Simple
- No lab equipment required
- Rapid yes/no decision
- Food after 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 software RIDA®SOFT Win

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 AOAC-OMA 2012.01"Final Action" AOAC-RI 120601 AACCI 38-50.01 Codex Alimentarius Method (Type I) 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; Detection limit: 0.5 mg/kg gliadin or 1.0 mg/kg gluten	96 determinations 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 or R7016 (not contained in the kit); Detection limit: 0.5 mg/kg gliadin or 1.0 mg/kg gluten	48 determination Incubation time: 30 min	R7002
RIDASCREEN® Gliadin competitive (2nd generation) AACCI 38-55.01 AOAC-OMA 2105.05	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 Detection limit: 2.3 mg/kg gliadin or 4.6 mg/kg gluten	96 determinations Incubation time: 40 min	R7021
	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	105 ml	R7006
Cocktail (patented)	Corresponding to R7006 but larger bottle size	1000 ml	R7016
RIDA® Extraction Solution (colorless)	Alternative to the Cocktail (patented) (use only after extraction comparision with Cocktail): The extraction is faster (35 min compared to 1 h 50 min with the cocktail); it is used in conjunction with R7001, R7002, R7003 and R7004	105 ml	R7098
Set of 3 processed Gliadin Assay Controls	Three assay controls: 3 positive homogenized processed snack samples for the determination with sandwich ELISA; produced by Trilogy® Analytical Laboratories	3 x 1.5 g	R7012
	Lateral flow test strips		
RIDA®QUICK Gliadin AOAC-OMA 2015.16 AACCI	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 Detection limit: 1-2 µg gliadin/100 cm^2 on surfaces, 2.2 mg/kg gliadin in raw materials, 3.1 mg/kg gliadin in processed food	25 Test strips in reclosable tube, 25 plastic pipettes, sample diluent (ready-to-use), 30 vials Incubation time: 5 min	R7003
RIDA®QUICK Gliadin (single packaged)	Corresponding to 7003, Test strips are single packaged and no plastic pipettes are included	25 Test strips single packed, sample diluent (ready-to-use), 30 vials Incubation time: 5 min	R7004
RIDA®QUICK Gliadin (ready to swab)	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

Allergens

Gluten

Product	Description	No. of tests/amount	Art. No.
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Gluten	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3106
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Gluten	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3206

Soy

	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; Detection limit: 0.24 mg/kg, the kit is suitable for automation	48 determinations Incubation time: 30 min	R7102
	ELISA – accessories		
Set of 3 processed Soya Assay Controls	Three assay controls: 1 negative, 2 positive homogenized processed cookies; produced by Trilogy® Analytical Laboratories	3 x 2 g	R7132
	Lateral flow test strips		
RIDA®QUICK Soya	Immunochromatographic test for the determination of soya on surfaces, also strongly heated soya samples were detected. It is recommended to use RIDA®QUICK Soya accessory pack (Z7103) for sample preparation. Detection limit: approx. 0.5 µg soya protein/100 cm²	25 dip sticks in reclosable tube, Conjugate, Extraction buffer, 30 Plastic tubes, 25 Tubes, 26 Swabs, 50 pipette tips Incubation time: 16 min	R7103
	RIDA®QUICK Soya		
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	2 x 100 ml	R7113
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Soya	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3101
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Soya	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3201

* Includes additional 100 reactions of Inhibition Control Mix (ICM).
** SureFood® QUANTARD Allergen 40 must be used for quantification.

Allergens

Milk

Produkt	Description	No. of tests/amount	Art. No.
	ELISA microtiter plates		
RIDASCREEN®FAST Milk AOAC-RI 101501	Sandwich ELISA to quantify milk proteins (casein and ß-lactoglobulin) in food containing traces of milk components; the assay is calibrated to NIST SRM 1549a whole milk powder; the kit is suitable for automation; Detection limit: 0.7 mg/kg milk protein	48 determinations Incubation time: 30 min	R4652
RIDASCREEN®FAST Casein (2nd generation)	Sandwich ELISA to quantify casein in food containing traces of milk or casein/caseinates; the kit is suitable for automation; Detection limit: 0.12 mg/kg casein in ice cream, chocolate, beverages and 0.71 mg/kg casein for all other samples (extraction with Extractor 2)	48 determinations Incubation time: 30 min	R4612
RIDASCREEN®FAST ß-Lactoglobulin	Sandwich ELISA to quantify native and processed ß-lactoglobulin in food containing traces of milk or whey; the kit is suitable for automation; Detection limit: 0.19 mg/kg ß-lactoglobulin	48 determinations Incubation time: 30 min	R4902
RIDASCREEN® ß-Lactoglobulin	Competitive ELISA to quantify native and processed ß-lactoglobulin in hydrolyzed milk products (e.g. hypoallergenic baby food); Detection limit: 0.1 mg/kg ß-lactoglobulin	96 determinations Incubation time: 2 hrs 45 min	R4901
	ELISA – accessories		
RIDA® Extractor 2	The RIDA® Extractor 2 (R4613) is used for the sample preparation in • RIDASCREEN®FAST Milk (R4652) • RIDASCREEN®FAST Casein (R4612) • RIDASCREEN®FAST ß-Lactoglobulin (R4902).	30 ml concentrate, sufficient for 15 samples	R4613
	Lateral flow test strips		
bioavid Lateral Flow Milch/Milk	Immunochromatographic tests for qualitative detection of milk; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 8 min	BL613-10 BL613-25
	Reference material		
MoniQA Milk Reference Material - Blank	Gluten free cookie, milled, free from gluten, milk, egg, soy, peanut, tree-nuts, Negative Control and/or Matrix Material as basis for spiked samples Prepared and packaged by Trilogy Analytical Laboratories	1 x 5 g	MQA 082015
MoniQA Milk Reference Material - SMP	Dried skim milk powder, characterized, Positive Control and/or use for spiked samples Prepared and packaged by Trilogy Analytical Laboratories	1 x 5 g	MQA 092014
MoniQA Milk Reference Material - Low	Dried skim milk powder incurred in gluten free cookies, milled, concentration approx. 10 ppm Prepared and packaged by Trilogy Analytical Laboratories	1 x 5 g	MQA 102016
MoniQA Milk Reference Material - High	Dried skim milk powder incurred in gluten free cookies, milled, concentration approx. 50 ppm Prepared and packaged by Trilogy Analytical Laboratories	1 x 5 g	MQA 082016
Set of 4 MoniQA Milk Reference controls - Blank, SMP, High, Low	Set includes each pouch of MQA 082015, MQA 092014, MQA 092016, MQA 082016 Prepared and packaged by Trilogy Analytical Laboratories	4 x 5 g	MQA 122016

Allergens

Egg

Produkt	Description	No. of tests/amount	Art. No.
	ELISA microtiter plates		
RIDASCREEN® FAST Ei/Egg Protein	Sandwich ELISA to quantify traces of whole egg powder in food; the assay is calibrated to NIST SRM 8445 whole egg powder; no cross-reactivity to chicken meat (raw and cooked); the kit is suitable for automation; Detection limit: 0.1 mg/kg whole egg powder, 0.03 mg/kg egg white protein	48 determinations Incubation time: 30 min	R6402
RIDASCREEN®FAST Lysozym	Sandwich ELISA to quantify traces of lysozyme in wine, cheese and sausage; Detection limit: 0.006 mg/kg lysozyme in wine, 0.016 mg/kg lysozyme in cheese and sausages	48 determinations Incubation time: 30 min	R6452
	Lateral flow test strips		
bioavid Lateral Flow Ei/Egg	Immunochromatographic tests for qualitative detection of egg; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 8 min	BL608-10 BL608-25

Nuts

Almond	**ELISA microtiter plates**		
RIDASCREEN®FAST Mandel/Almond	Sandwich ELISA to quantify traces of almond in food; Detection limit: 1.2 mg/kg almond	48 determinations Incubation time: 30 min	R6901
	Lateral flow test strips		
bioavid Lateral Flow Almond	Immunochromatographic tests for qualitative detection of almond; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL601-10 BL601-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Almond	Detection limit: ≤ 4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3104
Brazil nut	**Lateral flow test strips**		
bioavid Lateral Flow Brazil nut	Immunochromatographic tests for qualitative detection of brazil nut; Detection limit: 1 mg/kg depending on matrix	25 Test strips Incubation time: 10 min	BL602-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Brazil nut	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3117
Cashew kernel	**ELISA microtiter plates**		
RIDASCREEN®FAST Cashew	Sandwich ELISA to quantify traces of cashew in food; Detection limit: 0.09 mg/kg cashew	48 determinations Incubation time: 30 min	R6872
	Lateral flow test strips		
bioavid Lateral Flow Cashew Kernel	Immunochromatographic tests for qualitative detection of cashew kernel; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL610-10 BL610-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Cashew	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3115

* Includes additional 100 reactions of Inhibition Control Mix (ICM).
** SureFood® QUANTARD Allergen 40 must be used for quantification.

Allergens

Nuts

Product	Description	No. of tests/amount	Art. No.
Coconut	**Lateral flow test strips**		
bioavid Lateral Flow Coconut	Immunochromatographic tests for qualitative detection of coconut; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL600-10 BL600-25
Hazelnut	**ELISA microtiter plates**		
RIDASCREEN®FAST Hazelnut DIN CEN/TS 15633-2 method	Sandwich ELISA to quantify traces of hazelnut in food; Detection limit: 1.5 mg/kg hazelnut	48 determinations Incubation time: 30 min	R6802
	Lateral flow test strips		
bioavid Lateral Flow Hazelnut	Immunochromatographic tests for qualitative detection of hazelnut; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL604-10 BL604-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Hazelnut	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3102
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Hazelnut	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3202
Macadamia nut	**ELISA microtiter plates**		
RIDASCREEN®FAST Macadamia	Sandwich ELISA to quantify traces of macadamia in food; Detection limit: 0.38 mg/kg macadamia	48 determinations Incubation time: 30 min	R6852
	Lateral flow test strips		
bioavid Lateral Flow Macadamia nut	Immunochromatographic tests for qualitative detection of macadamia nut; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL605-10 BL605-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Macadamia nut	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3116
Pecan nut	**Real-time PCR – qualitative DNA detection**		
SureFood® ALLERGEN ID Pecan	Detection limit: ≤ 4 mg/kg; depending on matrix	100 reactions*	S3118
Peanut	**ELISA microtiter plates**		
RIDASCREEN®FAST Peanut AOAC-RI 030404	Sandwich ELISA to quantify traces of peanut in food; the assay is calibrated to NIST SRM 2387 peanut butter Detection limit: 1.3 mg/kg peanut	48 determinations Incubation time: 30 min	R6202
	Lateral flow test strips		
bioavid Lateral Flow Peanut	Immunochromatographic tests for qualitative detection of peanut; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL606-10 BL606-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Peanut	Detection limit: ≤ 1 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3103
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Peanut	Detection limit: ≤ 1 mg/kg Quantification limit: 4 mg/kg depending on matrix and DNA preparation	100 reactions**	S3203

* Includes additional 100 reactions of Inhibition Control Mix (ICM).
** SureFood® QUANTARD Allergen 40 must be used for quantification.

Allergens

Nuts

Product	Description	No. of tests/amount	Art. No.
Pistachio	**Lateral flow test strips**		
bioavid Lateral Flow Pistachio	Immunochromatographic tests for qualitative detection of pistachio; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL611-10 BL611-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Pistachio	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3114
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Pistachio	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3214
Walnut	**Lateral flow test strips**		
bioavid Lateral Flow Walnut	Immunochromatographic tests for qualitative detection of walnut and pecan nut; Detection limit: 10 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL607-10 BL607-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Walnut	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3107
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Walnut	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3207

Oil plants

	ELISA microtiter plates		
RIDASCREEN®FAST Sesame	Sandwich ELISA to quantify traces of sesame in food; Detection limit: 0.2 mg/kg sesame	48 determinations Incubation time: 30 min	R7202
	Lateral flow test strips		
bioavid Lateral Flow Sesam/Sesame	Immunochromatographic tests for qualitative detection of sesame Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL609-10 BL609-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Sesame	Detection limit: ≤ 0.4 mg/kg depending on matrix and DNA preparation	100 reactions*	S3108
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Sesame	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3208

* Includes additional 100 reactions of Inhibition Control Mix (ICM).
** SureFood® QUANTARD Allergen 40 must be used for quantification.

Allergens

Fish/Crustacean/Seafood

Product	Description	No. of tests/amount	Art. No.
	ELISA microtiter plates		
RIDASCREEN®FAST Crustacean (2nd generation)	Sandwich ELISA to quantify traces of crustacean in food; Detection limit: 2 mg/kg crustacean	48 determinations Incubation time: 30 min	R7312
	Lateral flow test strips		
bioavid Lateral Flow Crustacean	Immunochromatographic tests for qualitative detection of crustacean; Detection limit: 10 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL616-10 BL616-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Crustaceans	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3112
SureFood® ALLERGEN ID Fish	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3110
SureFood® ALLERGEN ID Molluscs	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3113

Various

Celery	**Real-time PCR – qualitative DNA detection**		
SureFood® ALLERGEN ID Celery	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3105
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Celery	Detection limit: ≤ 0.4 mg/kg Quantification limit: 1 mg/kg depending on matrix and DNA preparation	100 reactions**	S3205
Lupin	**ELISA microtiter plates**		
RIDASCREEN®FAST Lupine	Sandwich ELISA to quantify traces of lupin in food Detection limit: 0.7 mg/kg lupin protein	48 determinations Incubation time: 30 min	R6102
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Lupin	Detection limit: ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions*	S3111
	Real-time PCR – quantitative DNA detection		
SureFood® ALLERGEN QUANT Lupin	Detection limit: ≤ 0.4 mg/kg Quantification limit: 2.6 mg/kg depending on matrix and DNA preparation	100 reactions**	S3211
Mustard	**ELISA microtiter plates**		
RIDASCREEN®FAST Senf/Mustard	Sandwich ELISA to quantify traces of mustard in food; the assay detects yellow, white, brown and black mustard Detection limit: 0.22 mg/kg mustard powder	48 determinations Incubation time: 30 min	R6152
	Lateral flow test strips		
bioavid Lateral Flow Senf/Mustard	Immunochromatographic tests for qualitative detection of mustard; Detection limit: 1 mg/kg depending on matrix	10 Test strips 25 Test strips Incubation time: 10 min	BL603-10 BL603-25
	Real-time PCR – qualitative DNA detection		
SureFood® ALLERGEN ID Mustard	Detection limit: ≤ 0.4 mg/kg depending on matrix and DNA preparation	100 reactions*	S3109

* Includes additional 100 reactions of Inhibition Control Mix (ICM).
** 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 ID 4plex Peanut/Hazelnut/Walnut + IAC	Detection limit: ≤ 1 mg/kg; depending on matrix and DNA preparation	100 reactions	S3402
SureFood® ALLERGEN ID 4plex Soya/Celery/Mustard + IAC	Detection limit ≤ 0.4 mg/kg; depending on matrix and DNA preparation	100 reactions	S3401

Accessories

Real-time PCR	**DNA preparation**		
SureFood® PREP Advanced	For highly processed matrices (food and feed)	50 preparations	S1053
	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. The material has been developed for PCR quantification of allergens in food	2 grams	S3301
Lateral Flow	**Tests strips**		
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	26 swabs in two single packaged plastic bags, vials, pipettes, 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 (9 ml buffer each)	BS810-25
bioavid Probenpuffer/Sample Buffer	The buffer is particularly suitable for preparation of difficult samples (e.g. ketchup, mayonnaise, flour) for bioavid Test strips	100 ml	BS815-100
	Service by bioavid		
Laboratory service	Service for the validation of difficult food matrices	Approx. 1 week processing time	on request

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

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
SureFast® Animal+Plant Control	Extraction control for plant or animal matrix	100 reactions	F4053

Screening

Screening			
SureFood® GMO Plant PLUS	Detection limit: 5 DNA copies depending on matrix and DNA preparation	100 reactions	S2049
SureFood® GMO Plant	Complementary kit to S2026 and S2126 Detection limit: 5 DNA copies depending on matrix and DNA preparation	100 reactions	S2056
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: 0.01 % depending on matrix and DNA preparation	2 x 50 reactions	S2022
SureFood® GMO SCREEN 35S + NOS + FMV	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions*	S2026
Multiplex screening			
SureFood® GMO SCREEN 4plex 35S/NOS/FMV + IAC	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2126
SureFood® GMO Plant 4plex Corn/Soya/Canola/Cotton	Detection limit: 4 ppm depending on matrix and DNA preparation	100 reactions	S2156
SureFood® GMO Plant 4plex Corn/Soya/Canola + IAC	Detection limit: 4 ppm depending on matrix and DNA preparation	100 reactions	S2158
SureFood® GMO SCREEN 4plex BAR/NPTII/PAT/CTP2:CP4 EPSPS	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2127

Real-time PCR – qualitative DNA detection

Canola			
SureFood® GMO ID MS8 Canola	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2062
Corn			
SureFood® GMO ID MIR162 Corn	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2035
SureFood® GMO ID MON863 Corn	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2037
Rice			
SureFood® GMO ID LibertyLink601 Rice	Detection limit: 0.01 % depending on matrix and DNA preparation	2 x 50 reactions	S2023
SureFood® GMO ID Bt63 Rice	Detection limit: 0.01 % depending on matrix and DNA preparation	2 x 50 reactions	S2024

* Includes additional 100 reactions of Inhibition Control Mix (ICM); 100 reactions for each parameter.

GMO

Real-time PCR – qualitative DNA detection

Product	Description	No. of tests/amount	Art. No.
Soya			
SureFood® GMO ID Roundup Ready Soya	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2030
SureFood® GMO ID RR2Y Soya	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2034
SureFood® GMO ID A2704-12 Soya	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2057
Multiplex real-time PCR			
SureFood® GMO ID 4plex Soya I MON87708, CV127, DP305423, MON87701, MON87769	Detection limit: 0.01 % depending on matrix and DNA preparation	100 reactions	S2161

Real-time PCR – quantitative DNA detection

Canola			
SureFood® GMO QUANT GT73 Canola	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2061
Corn			
SureFood® GMO QUANT Bt176 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2015
SureFood® GMO QUANT Bt11 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2016
SureFood® GMO QUANT T25 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2017
SureFood® GMO QUANT MON810 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2019
SureFood® GMO QUANT 35S Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2020
SureFood® GMO QUANT NK603 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2050
SureFood® GMO QUANT MON863 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2051
SureFood® GMO QUANT MIR162 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2135
SureFood® GMO QUANT GA21 Corn	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2054
Soya			
SureFood® GMO QUANT Roundup Ready Soya	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2014
SureFood® GMO QUANT 35S Soya	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2028
SureFood® GMO QUANT RR2Y Soya	Limit of quantification: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S2029

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

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 delivers 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 and quantitatively using the ANIMAL ID and 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

SureFood® ANIMAL ID

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	Extraction control for plant or animal matrix	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
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 Horse & Donkey IAAC*	Detection limit: 0.1 % depending on matrix and DNA preparation	100 reactions	S6119
SureFood® ANIMAL ID Pork SENS PLUS	Detection limit: ≤ 0.0005% 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 Waterbuffalo 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
Other species			
SureFood® ANIMAL ID Cat & Dog IAAC*	Detection limit: 0.5 % depending on matrix and DNA preparation	100 reactions	S6112

* IAAC = Internal Amplification and Animal Control.
The IAAC kits require a 2-channel real-time thermocycler (FAM und VIC/HEX).
These kits have been validated on Bio-Rad CFX96, Qiagen Rotor-Gene, Roche LC480 and Agilent Mx3005P.
Exception: S6119 requires a 3-channel and S6121 a 4-channel device.

Real-time PCR – quantitative DNA detection

Product	Description	No. of tests/amount	Art. No.
SureFood® ANIMAL ID Rabbit IAAC*	Detection limit: 0.1 % depending on matrix and DNA preparation	100 reactions	S6120
Farm animals			
SureFood® ANIMAL QUANT Beef	Detection limit: 0.04 % depending on matrix and DNA preparation	2 x 50 reactions**	S1010
SureFood® ANIMAL QUANT Equus	Detection of horse, donkey and zebra Detection limit: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S1016
SureFood® ANIMAL QUANT Sheep	Detection limit: 0.1 % depending on matrix and DNA preparation	2 x 50 Reaktionen**	S1017
SureFood® ANIMAL QUANT Pork	Detection limit: 0.04 % depending on matrix and DNA preparation	2 x 50 reactions**	S1011
Poultry			

** 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.
SureFood® ANIMAL QUANT Chicken	Detection limit: 0.1 % depending on matrix and DNA preparation	2 x 50 reactions**	S1014
Fish			
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
SureFood® FISH ID Oncorhynchus tshawytscha IAAC*	Detection of chinook salmon; Detection limit: 2 % depending on matrix and DNA preparation	50 reactions	S6301
SureFood® FISH ID Oncorhynchus mykiss IAAC*	Detection of rainbow trout; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6302
SureFood® FISH ID Oncorhynchus gorbuscha IAAC*	Detection of humpback salmon; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6303
SureFood® FISH ID Oncorhynchus nerka IAAC*	Detection of red salmon; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6304
SureFood® FISH ID Salmo trutta IAAC*	Detection of trout; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6305
SureFood® FISH ID Salmo salar IAAC*	Detection of atlantic salmon; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6306
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: 1 % depending on matrix and DNA preparation	50 reactions	S6310
SureFood® FISH ID Pollachius virens IAAC*	Detection of pollock/saithe; Detection limit: 2 % depending on matrix and DNA preparation	50 reactions	S6309
SureFood® FISH ID Merlangius merlangus IAAC*	Detection of whiting; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6312
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 Merluccius merluccius IAAC*	Detection of european hake; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6311

* IAAC = Internal Amplification and Animal Control.
The IAAC kits require a 2-channel real-time thermocycler (FAM und VIC/HEX).
These kits have been validated on Bio-Rad CFX96, Qiagen Rotor-Gene, Roche LC480 and Agilent Mx3005P.
Exception: S6119 requires a 3-channel and S6121 a 4-channel device.

Risk material

Product	Description	No. of tests/amount	Art. No.
SureFood® FISH ID Melanogrammus aeglefinus IAAC*	Detection of haddock; Detection limit: 1 % depending on matrix and DNA preparation	50 reactions	S6307
	ELISA microtiter plates		
RIDASCREEN® Risk Material	Enzyme immunoassay for quantitative analysis of risk material (CNS) in processed meat and meat products Detection limit: < 0.2 % for CNS tissue	96 determinations Incubation time: 1 hr	R6701

BSE

RIDASCREEN® Risk Material 10/5	Enzyme immunoassay for qualitative analysis of risk material (CNS) in raw meat, meat products and on contaminated surfaces Detection limit: < 0.1 % for CNS tissue	96 determinations Incubation time: 15 min	R6703
	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	1 mg	R8007
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

SureFast® realt-time PCR

- Real-time PCR for screening und species identification
- Effective DNA/RNA-extraction
- Multiplex real-time kits

Bacteria, viruses, contaminants and spoilers

SureFast® 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 alinement 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 40 determinations	HS9541 HS9542
Compact Dry CC	Test plate with nutrient pad for detection of total aerobic count in teaproducts	100 determinations 40 determinations	HS7311 HS7312
Compact Dry CF MicroVal MV0806-003L; NordVal 35; AOAC-RI 110401	Test plate with nutrient pad for quantitative detection of coliforms	100 determinations 40 determinations	HS8791 HS8792
Compact Dry EC MicroVal MV0806-004LR; NordVal 36; AOAC-RI 110402	Test plate with nutrient pad for quantitative detection of *E. coli* and coliforms	100 determinations 40 determinations	HS8781 HS8782
Compact Dry ETB MicroVal MV0806-002LR; NordVal 34	Test plate with nutrient pad for quantitative detection of *Enterobacteriaceae*	100 determinations 40 determinations	HS9431 HS9432
Compact Dry ETC NordVal 47	Test plate with nutrient pad for quantitative detection of Enterococci	100 determinations 40 determinations	HS9461 HS9462
Compact Dry LS	Test plate with nutrient pad for quantitative detection of *Listeria* spp.	100 determinations 40 determinations	HS8811 HS8812
Compact Dry PA	Test plate with nutrient pad for quantitative detection of *Pseudomonas aeruginosa*	100 determinations 40 determinations	HS9491 HS9492
Compact Dry SL	Test plate with nutrient pad for detection of *Salmonella*	100 determinations 40 determinations	HS9401 HS9402
Compact Dry TC MicroVal RQA2007LR01; NordVal 33; AOAC-RI 10404	Test plate with nutrient pad for detection of total aerobic count	100 determinations 40 determinations	HS8771 HS8772
Compact Dry VP	Test plate with nutrient pad for quantitative detection of *Vibrio parahaemolyticus* and *Vibrio* spp.	100 determinations 40 determinations	HS8821 HS8822
Compact Dry YM MicroVal RQA2008LR10; NordVal 43; AOAC-RI 100401	Test plate with nutrient pad for quantitative detection of yeast and mold	100 determinations 40 determinations	HS8801 HS8802
Compact Dry YMR (Approvals in progress)	Test plate with nutrient pad for rapid quantitative detection of yeast and mold in 48 - 72 h	100 determinations 40 determinations	HS9801 HS9802
Compact Dry X-BC MicroVal 2011LR41; NordVal 45	Test plate with nutrient pad for quantitative detection of *Bacillus cereus*	100 determinations 40 determinations	HS9721 HS9722
Compact Dry X-SA MicroVal 2008LR14; NordVal 42; AOAC-RI 81001	Test plate with nutrient pad for quantitative detection of *Staphylococcus aureus*	100 determinations 40 determinations	HS9621 HS9622
	Accessories		
RIDA® 0.9 % NaCl, sterile	1 ml sterile sodium chloride solution	150 pieces (1 ml each)	Z0301
Promedia ST-25	Sampling device (sterile swab in 10 ml sterile PBS buffer)	10 pieces	Z0302
Compact Dry Swab	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 (9 ml PBS buffer per well) - sterile	128 pieces	ZDP1000888
Dilution Rack-MRD	Dilution set for preparation of 10-fold dilution series (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 25 determinations	HS0411 HS0412
RIDA®STAMP ECC	Agar stamp plate for surface monitoring of *E. coli* & Coliforms on solid foods and environmental surfaces	50 determinations 25 determinations	HS0431 HS0432
RIDA®STAMP Pseudomonas	Agar stamp plate for surface monitoring of *Pseudomonas* spp. on solid foods and environmental surfaces	50 determinations 25 determinations	HS2011 HS2012
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 25 determinations	HS0291 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 25 determinations	HS1831 HS1832
RIDA®STAMP YM-P	Agar stamp plate for surface monitoring of fungi on solid foods and environmental surfaces	50 determinations 25 determinations	HS0371 HS0372

Microbiology/hygiene

Pathogens & bacterial toxins

Product	Description	No. of tests/amount	Art. No.
	DNA preparation		
SureFast® PREP Bacteria	Preparation of bacteria DNA	100 preparations	F1021
SureFast® Speed PREP	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 Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5126
SureFast® Emetic Bacillus cereus PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5127
Campylobacter	**ELISA microtiter plates**		
RIDASCREEN® Campylobacter	Enzyme immunoassay for the determination of *Campylobacter* in food	48 determinations	R4204
	Qualitative real-time PCR		
SureFast® Campylobacter PLUS (*C. jejuni, C. lari, C. coli*)	Qualitative DNA detection 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 Detection of *C. botulinum* toxin groups A, B, E, F Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5110
SureFast® Clostridium perfringens PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5123
Cronobacter	**Qualitative real-time PCR**		
SureFast® Cronobacter PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5114
SureFast® Cronobacter sakazakii PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5115
E.coli	**ELISA microtiter plates**		
RIDASCREEN® Verotoxin	Enzyme immunoassay for the detection of pathogenic *E. coli* (indirectly via verotoxins 1 and 2)	96 determinations Incubation time: 1 hr 45 min	R5701
	Accessories		
Enrichment broth	mTSB-bouillon with Mytomycin C for the enrichment of verotoxin (shigatoxin)-producing *E. coli* bacteria	100 tubes 25 tubes	Z1000 Z1003
	Qualitative real-time PCR		
SureFast® Escherichia coli PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5157
SureFast® Escherichia coli eae gene	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5104
SureFast® EHEC/EPEC 4plex	Qualitative DNA detection of virulence gene *stx1, stx2, eae, ipaH* (*E. coli*/*Shigella* differenciation)	100 reactions	F5128
SureFast® STEC Screening PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5105
Listeria	**ELISA microtiter plates**		
RIDASCREEN® Listeria	Enzyme immunoassay for the determination of *Listeria* in food	96 determinations	R4202
	Qualitative real-time PCR		
SureFast® Listeria Screening PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5117
SureFast® Listeria monocytogenes PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5113

Pathogens & bacterial toxins

Product	Description	No. of tests/amount	Art. No.
Pseudomonas	**Qualitative real-time PCR**		
SureFast® Pseudomonas aeruginosa PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies,	100 reactions	F5503
Salmonella	**ELISA**		
RIDASCREEN® Salmonella 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 AOAC-RI 041103	DNA preparation of *Salmonella*	100 preparations	F1007
	Qualitative real-time PCR		
SureFast® Salmonella PLUS AOAC-RI 041103	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5111
	Qualitative real-time PCR and DNA preparation		
SureFast® Salmonella ONE	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment Kit includes DNA preparation	100 reactions / 100 preparations	F5211
SureFast® Salmonella Serotype 3plex	Qualitative DNA detection of *S.* typhimurium and *S.* enteritidis Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5159
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 Detection limit: 0.25 ng/ml toxin (0.375 ng/g)	12 determinations 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 Detection limit: 0.25 ng/ml toxin (0.375 ng/g)	96 determinations 48 determinations Incubation time: 2 hrs 45 min	R4105 R4106
	Qualitative real-time PCR		
SureFast® Staphylococcus aureus PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5116
Vibrio	**Qualitative real-time PCR**		
SureFast® Vibrio Screening PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5118
SureFast® Vibrio 4 plex (V. cholerae, V. parahaemolyticus, V. vulnificus +IAC)	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, 1 cfu after enrichment	100 reactions	F5161
Yersinia	**Qualitative real-time PCR**		
SureFast® Yersinia enterocolitica PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies	100 reactions	F5124
Histomonas (parasites)	**Qualitative real-time PCR**		
SureFast® Histomonas meleagridis PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies	100 reactions	F5158
	Qualitative real-time PCR and DNA preparation		
SureFast® Histomonas meleagridis ONE	Qualitative DNA detection Detection limit: ≤ 5 DNA copies, Kit includes a solution for DNA-extraction	100 reactions / 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 PLUS	Qualitative detection of Norovirus genogroup I and II Detection limit: ≤ 50 RNA copies	100 reactions	F7001
SureFast® Norovirus I & II 3plex	Qualitative detection and differentiation of Norovirus genotype I and II Detection limit: ≤ 50 RNA copies	100 reactions	F7140
SureFast® Norovirus/Hepatitis A 3plex	Qualitative detection of Norovirus and Hepatitis A Detection limit: ≤ 50 RNA copies	100 reactions	F7124
SureFast® Hepatitis A PLUS	Qualitative detection of Hepatitis A Detection limit: ≤ 50 RNA copies	100 reactions	F7125
SureFast®Influenza A PLUS	Qualitative detection of influenza virus A Detection limit: ≤ 25 RNA copies	100 reactions	F7103
SureFast®Influenza A H5/H7/H9 4plex	Qualitative detection and differentiation of influenza virus A, H5, H7 and H9 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.	100 reactions	F5502
SureFast® Legionella pneumophila PLUS	Qualitative DNA detection of *Legionella pneumophila*	100 reactions	F5501
SureFast® Legionella 3plex	Qualitative DNA detection of *Legionella spp.* and *Legionella pneumophila* Detection limit: ≤ 5 DNA copies	100 reactions	F5505
	Qualitative real-time PCR		
SureFast® Parasitic Water Panel 4plex	Qualitative DNA detection Detection limit: ≤ 5 DNA copies	100 reactions	F5506
SureFast® Enterobacteriaceae Screening PLUS	Qualitative DNA detection Detection limit: ≤ 5 DNA copies	100 reactions	F5507
SureFast® Pseudomonas aeruginosa PLUS	Qualitative DNA detection of *Pseudomonas aeruginosa*, 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) 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 66 under “Culture Medium Systems for Colony Counting and Pathogen Detection”.

Beverage analysis

Product	Description	No. of tests/amount	Art. No.
Juice	**DNA preparation**		
GEN-IAL® Simplex® Easy Spin DNA kit	*Alicyclobacillus* DNA extraction from fruit or vegetable juices or concentrates	50 preparations	SES 0050
	Qualitative multiplex real-time PCR		
GEN-IAL® Alicyclobacillus multiplex TaqMan™	DNA Screening of *Alicyclobacillus* ssp., *A. acidocaldarius* and *A. acidoterrestris* in fruit juices or concentrates	50 reactions	TPABM 0050
GEN-IAL® Alicyclobacillus spp.	Specific DNA detection of *Alicyclobacillus*	50 reactions	TPAB 0050
Wine	**DNA preparation**		
GEN-IAL® Simplex® Easy Wine kit	DNA preparation of wine samples	100 preparations	SEW 0100
	Qualitative multiplex real-time PCR		
GEN-IAL® First-Wine PCR Screening TaqMan™	DNA screening and differentiation of wine spoilage bacteria and yeasts: *Lactobacillus; Pediococcus; Oenococcus oeni; acetic acid bacteria*; yeast	50 reactions	TPWS 0050
GEN-IAL® First-Wine PCR Screening TaqMan™	DNA Screening of wine spoilage bacteria: *Lactobacillus; Pediococcus; Oenococcus oeni;* acetic acid bacteria	50 reactions	TPWSOH 0050
	Qualitative real-time PCR		
GEN-IAL® First-Oenococcus Oeni	Specific DNA detection of *Oenococcus oeni*	50 reactions	TPOE 0050
GEN-IAL® First-Wine Screening Biogene Amine	Specific DNA detection of bacteria forming biogenic amines	50 reactions	BAM 0050
Wine/beer	**Qualitative real-time PCR**		
GEN-IAL® Acetic acid bacteria TaqMan™	Specific DNA detection of acetic acid bacteria	50 reactions	TPA 0050
GEN-IAL® QuickGEN* Acetic acid bacteria TaqMan™	Specific DNA detection of acetic acid bacteria	50 reactions	QTPA 0050
GEN-IAL® Dekkera bruxellensis TaqMan™ FH	Specific DNA detection of *Dekkera bruxellensis* (FAM HEX)	50 reactions	TPYDB 0050 FH
GEN-IAL® Dekkera bruxellensis TaqMan™ FR	Specific DNA detection of *Dekkera bruxellensis* (FAM ROX)	50 reactions	TPYDB 0050 FR
GEN-IAL® Dekkera bruxellensis TaqMan™ Spartan DX-12	Specific DNA detection of *Dekkera bruxellensis*	50 reactions	TPYDB 0050 SP
GEN-IAL® Dekkera bruxellensis TaqMan™ MyGo Pro	Specific DNA detection of *Dekkera bruxellensis*	50 reactions	QTPYDB 0050 MG

* 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 or FSE 0100 and subsequent QuickGEN detection kits.

Microbiology/hygiene

Beverage analysis

Product	Description	No. of tests/amount	Art. No.
Beer	**DNA preparation**		
GEN-IAL® Simplex® Easy DNA kit	DNA preparation of beverage samples	100 preparations	SE 0100
GEN-IAL® QuickGEN* Sample preparation filtration	DNA preparation of beverage samples, Filtration	100 preparations	FSE 0100
	DNA preparation with centrifugation without enrichment		
GEN-IAL® QuickGEN* Sample preparation centrifugation	DNA preparation of beverage samples, Centrifugation	100 preparations	CSE 0100
Beer – bacteria & yeast	**Qualitative multiplex real-time PCR**		
GEN-IAL® First-Beer Differentiation PCR Kit	Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers	96 reactions	TPBD 0096
GEN-IAL® First-Beer Differentiation PCR Kit for LC 480	Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers for LC480	96 reactions	TPBD 0096 LC480
GEN-IAL® QuickGEN* First-Beer Differentiation PCR Kit	Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers	96 reactions	QTPBD 0096
GEN-IAL® QuickGEN* First-Beer Differentiation PCR Kit for LC 480	Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers for LC480	96 reactions	QTPBD 0096 LC480
GEN-IAL® QuickGEN* First-Beer Differentiation PCR Kit for MyGo Pro	Multiplex detection (30 species) and identification (19 species) of relevant beer spoilers for MyGo Pro	96 reactions	QTPBD 0096 MG
GEN-IAL® First-Beer yeast and bacteria differentiation TaqMan™	Multiplex detection and identification of beverage spoiling bacteria and yeasts	96 reactions	TPYB 0096
GEN-IAL® First-Beer yeast and bacteria differentiation TaqMan™ LC 480	Multiplex detection and identification of beverage spoiling bacteria and yeasts	96 reactions	TPYB 0096 LC480
GEN-IAL® QuickGEN* First-Beer yeast and bacteria differentiation TaqMan™ MyGo Pro	Multiplex detection and identification of beverage spoiling bacteria and yeasts for MyGo Pro	96 reactions	QTPYB 0096 MG
GEN-IAL® P1 Hyb Probe Screening LC 2.0 FRET	DNA screening and differentiation of bacteria and yeasts for LC 2.0	50 reactions	PP1H 0050 LC2.0
GEN-IAL® P1 Screening TaqMan™	DNA Screening and differentiation of beer spoiling bacteria and yeasts	50 reactions	PP1T 0050
GEN-IAL® QuickGEN* P1 Screening TaqMan™	DNA screening and differentiation of beer spoiling bacteria and yeasts	50 reactions	QPP1T 0050
GEN-IAL® QuickGEN* P1 Screening TaqMan™	DNA screening and differentiation of beer spoiling bacteria and hop resistance genes	50 reactions	QPP1HR 0050
GEN-IAL® P1 Screening Spartan DX-12 TaqMan™	DNA screening without differentiation of bacteria and yeasts	50 reactions	PP1T 0050 SP
GEN-IAL® P1OHScreening Spartan DX-12 TaqMan™	DNA screening without differentiation of bacteria	50 reactions	PP1TOH 0050 SP
GEN-IAL® QuickGEN* First-Biofilm TaqMan™	Specific DNA detection of *Lactococcus lactis*, *Leuconostoc mesenteroides* and *Pichia anomala*	50 reactions	QTPBF 0050
GEN-IAL® First Yeast Hyb Probe Screening LC 2.0 FRET	DNA screening and differentiation of yeasts	50 reactions	PYHYB 0050 LC2.0

* 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 or FSE 0100 and subsequent QuickGEN detection kits.

Beverage analysis

Product	Description	No. of tests/amount	Art. No.
Beer – bacteria	**Qualitative real-time PCR**		
GEN-IAL® Pectinatus spp./Megasphaera spp. TaqMan™	Specific DNA detection and differentiation of *Pectinatus* and *Megasphaera*	50 reactions	TPPMD
Beer – resistance genes	**Qualitative real-time PCR**		
GEN-IAL® hop resistance genes horA and horC / hitA and orf5 TaqMan™	Specific DNA detection of hop resistance genes	50 reactions	TPHR 0050
GEN-IAL® QuickGEN* hop resistance genes horA and horC / hitA and orf5 TaqMan™	Specific DNA detection of hop resistance genes	50 reactions	QTPHR 0050
Beer – yeast	**Qualitative real-time PCR**		
GEN-IAL® Dekkera anomala TaqMan™	Specific DNA detection of *Dekkera anomala*	50 reactions	TPYDA 0050
GEN-IAL® Pichia anomala TaqMan™	Specific DNA detection of *Pichia anomala*	50 reactions	TPYPA 0050
GEN-IAL® Saccharomyces diastaticus TaqMan™	Specific DNA detection of *Saccharomyces diastaticus*	50 reactions	TPYSD 0050
GEN-IAL® Pichia membranaefaciens TaqMan™	Specific DNA detection of *Pichia membranaefaciens*	50 reactions	TPYPM 0050
GEN-IAL® Bottom fermented yeast TaqMan™	Specific DNA detection of bottom fermented yeast	50 reactions	TPYUG 0050
GEN-IAL® Top fermented yeast TaqMan™	Specific DNA detection of top fermented yeast	50 reactions	TPYOG 0050
GEN-IAL® accessories	**real-time PCR**		
GEN-IAL® Dekkera bruxellensis Standards	DNA standards for *Dekkera bruxellensis* quantification	200.000 cfu	DBST 0100
Color Compensation Kit LC 480	Color compensation kit for multiplex assays	5 reactions	PP1TCC 0005
Color Compensation Kit LC LightCycler	Color compensation kit for multiplex assays	5 reactions	CCFH 0005
Washing solution	Washing solution for SEW 0100	43 ml	WS 0100

Test systems for cleaning control

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 40 determinations	R1091 R1092

* 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 or FSE 0100 and subsequent QuickGEN detection kits.

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 analyser, 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 analysis of lateral flow tests

ThunderBolt®

Test running

Automate for the processing of an ELISA

RIDA®CUBE SCAN

Single tests

Small automate for enzymatic tests

Equipment/software/accessories

Equipment

Product	Description	No. of tests/amount	Art. No.
ELISA	**Photometer**		
ChroMate® 4300	Microtiter plate reader; suitable only for 450nm wavelenght with reference wavelenght at 630nm	1	ZCR4300
BioTek® ELx800™	Microtiter plate photometer	1	ZELX800
	Automates		
ChemWell®2910	1-microtiter plate analyser	1	ZCW2910
GEMINI	2-microtiter plate analyser	1	ZGEMINI
ThunderBolt®	2-microtiter plate analyser	1	ZTB
Bolt™	1-microtiter plate analyser	1	ZBOLT
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 presure dispenser units to be used in conjunction with the IMMUNOPREP® ONLINE cartridges	1	ZRIDACREST 1500
Enzymatic analysis	**Autoanalyzer**		
RIDA®CUBE SCAN 340/505 Analyser set	Automatic analyser only for RIDA®CUBE test kits	1 set	ZRCS0505
RIDA®CUBE SCAN 340/546 Analyser set	Automatic analyser only for RIDA®CUBE test kits	1 set	ZRCS0546
RIDA®CUBE SCAN 340/580 Analyser set	Automatic analyser only for RIDA®CUBE test kits	1 set	ZRCS0580
RIDA®CUBE SCAN Tablet PC	Separate tablet for replacement	1	ZRCT0500
qPCR	**qPCR thermocycler**		
Mx3005P	real-time PCR instrument with notebook computer	1 unit	ZMX3005P1
Mycotoxin rapid test	**RIDA®QUICK**		
RIDA®SMART APP STAND NEXUS 6	Smartphone stand for NEXUS 6	1	ZRSAN6-STAND
RIDA®SMART APP STAND NEXUS 6P	Smartphone stand for NEXUS 6P	1	ZRSAN6P-STAND

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	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			
RIDA®SOFT Win.NET	Software for measurement, evaluation and documentation of RIDASCREEN® ELISAs	1 unit	Z9996
Mycotoxines lateral flow tests	**RIDA®QUICK**		
RIDA®SMART APP	Software application for the NEXUS 6 and NEXUS 6P smartphone for the quantification of RIDA®QUICK RQS mycotoxin lateral flow tests.	1 voucher	ZRSAM1000

Equipment/software/accessories

Accessories

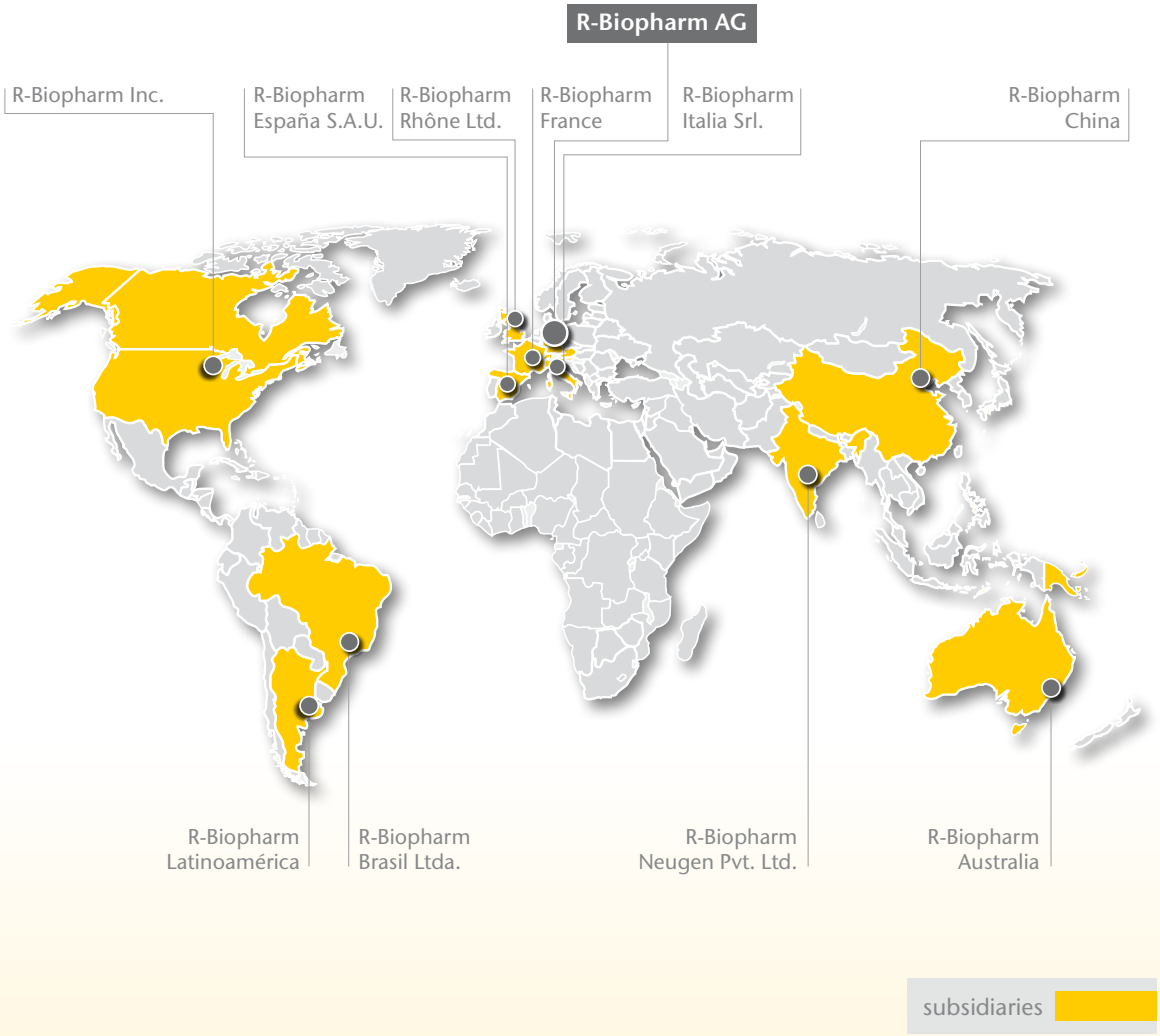
Product	Description	No. of tests/amount	Art. No.
Mycotoxin analysis (HPLC)	**Immunoaffinity columns**		
PBS-Tablets	Phosphate buffered saline tablets	100 (suitable for 10 l)	RBRRP202
Immunoaffinity Column Rack	Durable brass and PFTE rack allowing 6 samples to be processed at one time using Immunoaffinity 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
Adapter	Re-usable adapters for use with Immunoaffinity columns	10 units	RBRRP200
Glass syringe barrels	for use with Immunoaffinity columns	1 unit	RBRRP201
Syringe pump unit	Re-usable syringe and rubber connector for use with Immunoaffinity columns	1 each	RBRRP203
	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
Spacer	Replacement spacer 0.2 mm for KOBRA® CELL Replacement spacer 0.1 mm for KOBRA® CELL Replacement spacer 0.1 mm for KOBRA® CELL with reaction channel	1 unit	RBRK07 RBRK08 RBRK09
Spacer grid	Replacement spacer grid for KOBRA® CELL	1 unit	RBRK10
Premi®Test			
Premi®Test Starter Kit	Starterkit for Premi®Test, includes accessories	1 Set	ZPT-2000
Premi®Test Multipress	Sampling device to squeeze 12 sample at once	1 unit	ZPT-2012
Real-time PCR	**SureFast®**		
SureCycle	For validation of thermocycler	4 tests	F4001
SureCC Color Compensation Kit I	Color Compensation for multiplex application of SureFood®/SureFast® kits on LC480	for 3 calibration runs	F4009
SureCC Color Compensation Kit II	Color Compensation for multiplex application of SureFood®/SureFast® kits on LC2.0 and 1.5	for 3 calibration runs	F4010
SureInhibition Control	Test for inhibiting substances	100 reactions	F4050
SureFast® Animal+Plant Control	Extraction control	100 reactions	F4053

Explanation

International standardisation and regulation authorities

AACCI	American Association of Cereal Chemists International
AFNOR	Association Française de Normalisation
AOAC	Association of Official Analytical Chemists AOAC METHODS VALIDATION PROGRAMS: • AOAC- RI Performance Tested Methods℠ • AOAC-OMA Official Methods℠ • 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**". The methods are primarily intended as international methods for the verification of provisions in Codex standards. Definition of Codex types of methods of analysis: (a) Defining Methods (Type I) e.g. R5 Mendez ELISA method (b) Reference Methods (Type II) (c) Alternative Approved Methods (Type III) (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.

r-biopharm

R-Biopharm AG

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