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 Gliadin. No lab equipment is required and results 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 new and unique multiplex real-time PCR allows the detection of 3 parameters plus internal amplification control in one run.

		
bioavid immunochromatographic test (LFD)	**RIDASCREEN® ELISA**	**SureFood® PCR**
Advantages		
• On-site swab testing • Simple procedure • No lab equipment required • Rapid yes/no decision • Also suitable for food (after validation)	• 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 (ChemWell®, GEMINI) • Evaluation with the software RIDA®SOFT Win	• Robust, stable target molecule (DNA) in highly processed food samples • Highly specific system with minimum tendency for cross-reactions • Uniform sample preparation (90 min) for all parameters using SureFood®PREP Advanced (S1053) • Standardized handling and test procedure (1 - 2 hrs)

INSULAB

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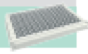
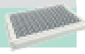
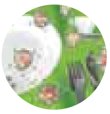
Gliadin

Product	Description	No. of Tests/Amount	Art. No.
Gliadin/Gluten	**ELISA Microtiter Plates**		
RIDASCREEN® Gliadin AOAC-OMA 2012.01 AOAC-RI 120601 AACCI 38-50.01 Codex Alimentarius Method (Type I)	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: 1.5 mg/kg (ppm) gliadin or 3.0 mg/kg (ppm) 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: 2.0 mg/kg (ppm) gliadin or 4.0 mg/kg (ppm) gluten	48 determination Incubation time: 30 min	R7002
RIDASCREEN® Gliadin competitive (2nd generation) AACCI 38-55.01	R5 competitive ELISA to quantify potential toxic peptide sequences of prolamines from wheat, rye and barley in fermented and hydrolyzed food (e.g. beer, starch, starch syrup, malt extracts); sample preparation with an ethanolic solution; the standard material is a hydrolyzate (mixture of wheat, rye and barley); the results can be related to the limit values of the Codex Alimentarius Detection limit: 1.36 mg/kg (ppm) gliadin or 2.7 mg/kg (ppm) 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, R7004 or R4612 (casein extraction of bakery goods and sausages)	105 ml	R7098
Set of 3 Gliadin Assay Controls	Three assay controls: 1 negative, 2 positive homogenized flour samples; produced by Trilogy® Analytical Laboratories	3 x 1.5 g	R7010
Set of 3 processed Gliadin Assay Controls	Three assay controls: 3 positive homogenized processed snack samples; produced by Trilogy® Analytical Laboratories	3 x 1.5 g	R7012
	Lateral Flow Test Strips (immunochromatographic tests)		
RIDA®QUICK Gliadin AOAC-OMA in preparation	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: 0.5 µg gliadin/100 cm^2 on surfaces Detection limit: 2.5 mg/kg (ppm) gliadin in e.g. gluten-free raw materials	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 packaged, 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 packaged, 25 prefilled vials with ready-to-use buffer	R7005

ELISA

Product	Description	No. of Tests/Amount	Art. No.
Soya	**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: 0.3 mg/kg (ppm) soy protein	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
Milk	**ELISA Microtiter Plates**		
RIDASCREEN®FAST Milk	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: 0.2 mg/kg (ppm) casein in ice cream, chocolate, beverages and 1.4 mg/kg (ppm) casein in bakery goods and sausages (extraction with R7098 not contained in the kit)	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: 0.2 mg/kg (ppm) 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 (ppm) 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 β-Lactoglobulin (R4902).	3 x 30 ml	R4613
Egg	**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 (ppm) whole egg powder, 0.03 mg/kg (ppm) 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: 0.02 mg/kg (ppm) lysozyme in wine, 0.1 mg/kg (ppm) lysozyme in cheese and sausages	48 determinations Incubation time: 30 min	R6452



Allergens

ELISA

Product	Description	No. of Tests/Amount	Art. No.
Nuts	**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: 1.5 mg/kg (ppm) peanut	48 determinations Incubation time: 30 min	R6202
RIDASCREEN®FAST Hazelnut DIN CEN/TS 15633-2 method	Sandwich ELISA to quantify traces of hazelnut in food; Detection limit: 1.5 mg/kg (ppm) hazelnut	48 determinations Incubation time: 30 min	R6802
RIDASCREEN®FAST Mandel/Almond	Sandwich ELISA to quantify traces of almond in food; Detection limit: 1.7 mg/kg (ppm) almond	48 determinations Incubation time: 30 min	R6901
RIDASCREEN®FAST Macadamia	Sandwich ELISA to quantify traces of macadamia in food; Detection limit: 0.6 mg/kg (ppm) macadamia	48 determinations Incubation time: 30 min	R6852
Various	**ELISA Microtiter Plates**		
RIDASCREEN®FAST Crustacean	Sandwich ELISA to quantify traces of crustacean proteins (e.g. tropomyosin) in food Detection limit: 0.2 mg/kg (ppm) crustacean protein	48 determinations Incubation time: 30 min	R7302
RIDASCREEN®FAST Lupine	Sandwich ELISA to quantify traces of lupin in food Detection limit: 0.6 mg/kg (ppm) lupin protein	48 determinations Incubation time: 30 min	R6102
RIDASCREEN®FAST Senf/Mustard	Sandwich ELISA to quantify traces of mustard in food; the assay detects yellow, white, brown and black mustard Detection limit: 0.2 mg/kg (ppm) mustard powder	48 determinations Incubation time: 30 min	R6152
RIDASCREEN®FAST Sesame	Sandwich ELISA to quantify traces of sesame in food; Detection limit: 0.24 mg/kg (ppm) sesame	48 determinations Incubation time: 30 min	R7202
Sampling	**Accessories**		
RIDA® Sampling Tools	Plastic tubes and cotton swabs (wood) for surface swabs, analysing with ELISA kit	100 of each	Z0010

Histamine

Histamine	**Enzymatic test Microtiter Plates**		
New RIDASCREEN® Histamin (enzymatic)	Enzymatic test in microtiter plate format for the quantitative determination of histamine in fish, canned fish and fish meal; Detection limit: 0.75 - 3.75 mg/kg (ppm) histamine depending on matrix	96 determinations Incubation time: 15 min	R1605
Histamine	**ELISA Microtiter Plates**		
RIDASCREEN® Histamin	Competitive ELISA to quantify histamine in food; Detection limit: 0.1 - 100 mg/kg (ppm) histamine depending on matrix	96 determinations 48 determinations Incubation time: 1 hr 15 min	R1601 R1604
Histamine	**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 (ppm) histamine depending on matrix	48 determinations Incubation time: 5 min	R1603

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Lateral Flow Test Strips

Product	Description	No. of Tests/Amount	Art. No.
Milk	**Lateral Flow Test Strips**		
bioavid Lateral Flow Milch / Milk	Immunochromatographic tests for qualitative detection of milk Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL613-10 BL613-25
Egg	**Lateral Flow Test Strips**		
bioavid Lateral Flow Ei / Egg	Immunochromatographic tests for qualitative detection of egg Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL608-10 BL608-25
Nuts	**Lateral Flow Test Strips**		
bioavid Lateral Flow Mandel / Almond	Immunochromatographic tests for qualitative detection of almond Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL601-10 BL601-25
bioavid Lateral Flow Paranuss / Brazil nut	Immunochromatographic tests for qualitative detection of brazil nut Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL602-10 BL602-25
bioavid Lateral Flow Cashewkern / Cashew Kernel	Immunochromatographic tests for qualitative detection of cashew kernel Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL610-10 BL610-25
bioavid Lateral Flow Kokosnuss / Coconut	Immunochromatographic tests for qualitative detection of coconut Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL600-10 BL600-25
bioavid Lateral Flow Haselnuss / Hazelnut	Immunochromatographic tests for qualitative detection of hazelnut Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL604-10 BL604-25
bioavid Lateral Flow Macadamia Nuss / Macadamia nut	Immunochromatographic tests for qualitative detection of macadamia nut Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL605-10 BL605-25
bioavid Lateral Flow Erdnuss / Peanut	Immunochromatographic tests for qualitative detection of peanut Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL606-10 BL606-25
biavid Lateral Flow Pistazie / Pistachio	Immunochromatographic tests for qualitative detection of pistachio Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL611-10 BL611-25
bioavid Lateral Flow Walnuss / Walnut	Immunochromatographic tests for qualitative detection of walnut and pecan nut Detection limit: 10 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 15 min	BL607-10 BL607-25
Various	**Lateral Flow Test Strips**		
bioavid Lateral Flow Crustaceen / Crustacean	Immunochromatographic tests for qualitative detection of crustacean Detection limit: 10 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL616-10 BL616-25
bioavid Lateral Flow Sesam / Sesame	Immunochromatographic tests for qualitative detection of sesame Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL609-10 BL609-25
bioavid Lateral Flow Senf / Mustard	Immunochromatographic tests for qualitative detection of mustard Detection limit: 1 mg/kg (ppm) depending on matrix	10 test strips 25 test strips Incubation time: 10 min	BL603-10 BL603-25

Lateral Flow Test Strips

Product	Description	No. of Tests/Amount	Art. No.
Accessories			
bioavid Wischtest Kit / Swabbing Kit	Swabbing kit with wood swabs for sampling of allergen resiues 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 resiues on surface (e.g. production lines) for bioavid lateral flow kits	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 samples (e.g. coffee, red wine) for bioavid lateral flow kits	25 vials (9 ml buffer each)	BS810-25
bioavid Stopp Lösung / Stop solution	Stop solution for the preservation of the test line in bioavid lateral flow assays	5 drop bottles (1 ml buffer each)	BS820-5
Service (by bioavid)			
Laboratory service	Service for the validation of difficult food matrices (by bioavid)	Approx. 1 week processing time	on request

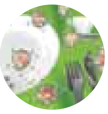
Real-time PCR – Qualitative DNA Detection

Product	Description	No. of Tests/Amount	Art. No.
DNA Präparation			
SureFood® PREP Advanced	For highly processed matrices (food and feed)	50 preparations	S1053
Multiplex			
SureFood® ALLERGEN ID 4plex Soya/Celery/ Mustard + IAC	Detection limit ≤ 1 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions	S3401
SureFood® ALLERGEN ID 4plex Peanut/Hazelnut/ Walnut + IAC	Detection limit: ≤ 1 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions	S3402
Gluten			
SureFood® ALLERGEN ID Gluten	Detection of gluten containing cereals (wheat, spelt, barley, oats, kamut, rye) Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3106
Soya			
SureFood® ALLERGEN ID Soya	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3101
Nuts			
SureFood® ALLERGEN ID Almond	Detection limit: ≤ 4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3104
SureFood® ALLERGEN ID Cashew	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3115
SureFood® ALLERGEN ID Hazelnut	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3102
SureFood® ALLERGEN ID Peanut	Detection limit: ≤ 1 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3103
SureFood® ALLERGEN ID Pistachio	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3114
SureFood® ALLERGEN ID Walnut	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3107
Crustaceans/Fish/Seafood			
SureFood® ALLERGEN ID Crustaceans	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3112
SureFood® ALLERGEN ID Fish	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3110
SureFood® ALLERGEN ID Molluscs	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3113
Various			
SureFood® ALLERGEN ID Celery	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3105
SureFood® ALLERGEN ID Lupin	Detection limit: ≤ 0.4 mg/kg (ppm); depending on matrix and DNA preparation	100 reactions*	S3111
SureFood® ALLERGEN ID Mustard	Detection limit: ≤ 0.4 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions*	S3109
SureFood® ALLERGEN ID Sesame	Detection limit: ≤ 0.4 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions*	S3108

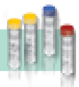





* Includes addtitional 100 reactions of Inhibition Control Mix (ICM).



Real-time PCR – Quantitative DNA Detection

Product	Description	No. of Tests/Amount	Art. No.
Gluten			
SureFood® ALLERGEN QUANT Gluten	Detection of gluten containing cereals (wheat, spelt, barley, oats, kamut, rye) Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3206
Soya			
SureFood® ALLERGEN QUANT Soya	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3201
Nuts			
SureFood® ALLERGEN QUANT Hazelnut	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3202
SureFood® ALLERGEN QUANT Peanut	Detection limit: ≤ 1 mg/kg (ppm) Quantification limit: 4 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3203
SureFood® ALLERGEN QUANT Pistachio	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3214
SureFood® ALLERGEN QUANT Walnut	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3207
Various			
SureFood® ALLERGEN QUANT Celery	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3205
SureFood® ALLERGEN QUANT Lupin	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 2,6 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3211
SureFood® ALLERGEN QUANT Sesame	Detection limit: ≤ 0.4 mg/kg (ppm) Quantification limit: 1 mg/kg (ppm) depending on matrix and DNA preparation	100 reactions**	S3208
	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 (ppm). Material is developed for quantification of allergens in food	2 grams	S3301

** SureFood® QUANTARD Allergen40 must be used for quantification in ppm units.