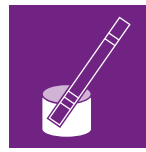


FOOD ALLERGEN



AgraStrip®

Allergens - Lateral Flow Devices

► AgraStrip® Allergen Test Kits available

Test Kit	Order number
AgraStrip® Almond Test kit	10002019
AgraStrip® β-Lactoglobulin Test kit	10002032
AgraStrip® Brazil Nut Test kit	10002055
AgraStrip® Casein Test kit	10002040
AgraStrip® Cashew/Pistachio Test kit	10002044
AgraStrip® Coconut Test kit	10002085
AgraStrip® Crustacea Test kit	10002074
AgraStrip® Egg Test kit	10002058
AgraStrip® Gluten Test kit	10002000
AgraStrip® Gluten G12® Test kit	10001995
AgraStrip® Hazelnut Test kit	10002004
AgraStrip® Lupin Test kit	10002047
AgraStrip® Macadamia Nut Test kit	10002051
AgraStrip® Milk Test kit	10002078
AgraStrip® Mustard Test kit	10002068
AgraStrip® Peanut Test kit	10001988
AgraStrip® Sesame Test kit	10002062
AgraStrip® Soy Test kit	10002010
AgraStrip® Walnut Test kit	10002028

The **AgraStrip® Allergen Test Kits** are very sensitive immunochromatographic assays in lateral flow format for the detection of traces of allergens in foodstuffs. Samples can vary from raw to processed food, from environmental swabs to rinse water. Lateral flow devices are a very fast and easy to use on-site detection method suitable for validation, verification and monitoring purposes in the food industry.

Competitive Advantages

Fast – 11 minutes time to result

Sensitive – LOD in low ppm*

Stable – 12 months shelf life at room temperature

Cost Effective – 10 single sample tests

User friendly – ready-to-use components, no additional equipment needed

*see validation data for more details



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Making the World's Food Safer®

Validation data of AgraStrip® Allergen Test Kits - Overview

	Almond	β-Lactoglobulin	Brazil Nut	Casein	Cashew Pistachio	Coconut	Crustacea	Egg	Gluten	Gluten G12®
Limit of Detection	2 ppm almond	0.5 ppm β-Lactoglobulin	5 ppm brazil nut	1 ppm casein	2 ppm cashew 2 ppm pistachio	10 ppm dried coconut	10 ppm crustacea (wet)	2 ppm dried whole egg	4 ppm gluten	2 ppm gluten*
Specificity (cross-reactivity)	no cross-reactivity with samples tested	k-Casein	100 % rye	no cross-reactivity with samples tested	Pink peppercorn and walnut (pure only)	Slight cross-reactivity to rice flour	100 % squid	no cross-reactivity with samples tested	rye and barley	rye, spelt, barley and some oat varieties
LOD in spiked Commodities**	1 ppm protein (5 ppm almond)	0.7 ppm β-Lactoglobulin	2 – 5 ppm protein (14.2 – 35.5 ppm brazil nut)	1 ppm casein	1 ppm protein (5 ppm cashew) 2 – 5 ppm pistachio protein (9.4 – 23.5 ppm pistachio)	1 ppm protein (10 ppm dried coconut)	1 ppm protein (7.1 ppm crustacea)	1 ppm protein (2.5 ppm dried whole egg)	5 ppm gluten	5 ppm gluten
Rinse water	neutral pH needed	-	neutral pH needed	neutral pH needed	neutral pH needed	Neutral pH recommended	-	neutral pH needed	neutral pH needed	variation in pH (5 – 9) does not affect result
Swabbing Recovery (plastic and stainless steel)	0.2 µg protein (1 µg almond)	0.5 µg β-Lactoglobulin	0.4 µg protein (2.8 µg brazil nut)	0.4 µg casein	0.4 µg protein (2 µg cashew, 1.9 µg pistachio)	1.5 µg protein (stainless steel, 20 µg dried coconut) 1 µg protein (plastic, 10 µg coconut)	0.2 µg protein (1.4 µg crustacea)	0.2 µg protein (0.5 µg dried whole egg)	4 µg gluten	4 µg gluten

* adjustable cut-off value: 5, 10 and 20 ppm gluten.

** for more information contact your sales representative.

Validation data of AgraStrip® Allergen Test Kits - Overview

	Hazelnut	Lupin	Macadamia Nut	Milk	Mustard	Peanut	Sesame	Soy	Walnut
Limit of Detection	5 ppm hazelnut	10 ppm lupin	2 ppm macadamian nut	1 ppm milk protein	2 ppm mustard	1 ppm peanut	5 ppm sesame	2 ppm soy	10 ppm walnut
Specificity	pecan nut and walnut	no cross-reactivity with samples tested	Rye	no cross-reactivity with samples tested	wheat flour, rye and rapeseed	slight cross-reactivity with green peas, white beans, soy beans	no cross-reactivity with samples tested	no cross-reactivity with samples tested	pecan nuts
LOD in spiked Commodities**	1 ppm protein (8 ppm hazelnut)	-	0.5 – 2 ppm protein (5.5 – 21.8 ppm macadamia)	1 ppm milk protein	2 – 20 ppm protein (6 – 60 ppm mustard)	1 ppm protein (4 ppm peanut)	0.5 – 5 ppm protein (2.8 – 27.5 ppm sesame)	2 ppm soy	1.5 – 3 ppm protein (10 – 20 ppm walnut)
Rinse water	neutral pH needed	neutral pH needed	neutral pH needed	neutral pH needed	neutral pH needed	neutral pH needed	neutral pH needed	variation in pH (5 – 9) does not affect result	neutral pH needed
Swabbing Recovery (plastic and stainless steel)	0.2 µg protein (1.6 µg hazelnut)	-	0.2 µg protein (2.2 µg macadamia)	0.3 µg protein (stainless steel, 1 µg SMP) 0.7 µg protein (plastic, 2 µg SMP)	1 µg protein (3 µg mustard)	0.2 µg protein (0.8 µg peanut)	0.2 µg protein (plastic, 1.1 µg sesame) 0.4 µg protein (stainless steel, 2.2 µg sesame)	2 µg soy	3 µg protein (stainless steel, 20 µg walnut) 7.5 µg protein (plastic, 50 µg walnut)

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FMCG and ROMER

Assay Principles

The AgraStrip® Allergen lateral flow devices are very sensitive immunochromatographic assays designed for the detection of allergen residues in foodstuffs. The test kits use highly purified antibodies raised against allergens. After extraction, the sample is incubated with the antibodies to form allergen-antibody complexes. Thanks to nanoparticle-conjugates present in the strips, very low amounts of allergen residues can be detected and visualized as a purple line. AgraStrip® Allergen test kits can also be used to validate and monitor cleaning procedures using rinse waters and environmental swabs samples. It is easy to use, fast and reliable.

Hook-Effect

The AgraStrip® Allergen Test kits are designed for the detection of trace amounts of allergens. If the sample contains a large percentage of the respective allergen, i.e. more than approx. 1% (10,000 ppm) of the allergen, the test may return a false-negative result.

Sampling

Food may contain an uneven distribution of allergen residues (spot contamination). It is important to obtain a representative sample of the food as only a small amount of material can be tested with the AgraStrip® Allergen Test kits. So far there are no official regulations on sampling for food allergen testing. One reason for this is the different nature of samples for food allergens as they can vary from solid, dry powders to viscous and liquid form. A different approach is necessary for each type of sample matrix.

Affordability and ease of use of the AgraStrip® Allergen Test kits allow that more samples can be taken and tested than in the past. This helps to identify these hot spots of contamination, thereby also reducing some of the largest variances in testing which arise from sampling and reducing the potential risk to consumers of hidden food allergens.

Swabbing

The AgraStrip® Allergen Test kits contain swabs for environmental sample collection.

- Each Test kit includes*:**
- 1 Tube containing 10 AgraStrip® Allergen test strips
 - 1 Bottle of 35 mL of ready-to-use extraction buffer
 - 10 Extraction tubes and caps
 - 10 Dropper tips for the extraction tube
 - 10 Sterile swabs with pre-scored tips
 - 10 Incubation vials in a foil pouch
 - 1 Vial rack
 - Package Insert
 - Certificate of performance

*Test kit composition and procedure for AgraStrip® Gluten and for AgraStrip® Gluten G12® varies.

NOTE: Please consult Package Inserts for detailed procedures, as they might vary slightly.



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