

# PRODUCT FOCUS

## AgraStrip® Pro

Allergens – Lateral Flow Devices



The **AgraStrip® Pro Allergen Test Kits** are very sensitive immunochromato-graphic 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** – Cut-off in low ppm range\*

**Stable** – 12 months shelf life at room temperature

**Cost Effective** – 15 single sample tests

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

\*see validation data for more details



### AgraStrip® Pro Allergen Test Kits available

Item	Item No.
AgraStrip® Pro Almond	10007055
AgraStrip® Pro beta-Lactoglobulin	10007056
AgraStrip® Pro Brazil nut	10007057
AgraStrip® Pro Casein	10007058
AgraStrip® Pro Cashew/Pistachio	10007059
AgraStrip® Pro Coconut	10007060
AgraStrip® Pro Crustacea	10007061
AgraStrip® Pro Gluten	10007062
AgraStrip® Pro Hazelnut	10007063
AgraStrip® Pro Lupin	10007064
AgraStrip® Pro Macadamia	10007065
AgraStrip® Pro Milk	10007066
AgraStrip® Pro Mustard	10007067
AgraStrip® Pro Peanut	10007068
AgraStrip® Pro Sesame	10007069
AgraStrip® Pro Soy	10007070
AgraStrip® Pro Walnut	10007071
AgraStrip® Pro Whole egg	10007072
<b>AgraStrip® Gluten G12®</b>	<b>10001995</b>



## Allergens

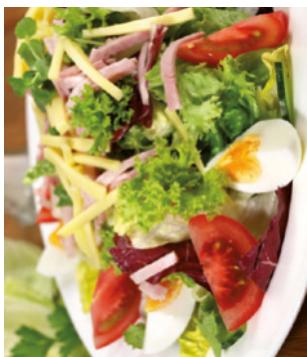
### Validation data of AgraStrip® Pro Allergen Test Kits – Overview

	Almond	$\beta$ -Lactoglobulin	Brazil Nut	Casein	Cashew	Coconut	Crustacea	Whole egg	Gluten	Gluten G12®
<b>Cut-off</b>	0.2 ppm almond	0.5 ppm $\beta$ -lactoglobulin	5 ppm brazil nut	1 ppm casein						
<b>Adjusted cut-off**</b>	0.4 ppm protein	-	0.7 ppm protein	-	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*
<b>Cross-reactivity</b>	Apricot pit	Expected to k-casein	possibly to pistachio	neutral pH needed	no cross-reactivity with samples tested	Hazelnut & pecan. Expected to pink peppercorn & walnut	Expected to squid	Chicken meat	Rye and barley; Possibly raps-seed	rye, spelt, barley and some oat varieties
<b>Effect of the extract pH</b>	neutral pH needed	not detected	neutral pH needed	neutral pH needed	not detected	not detected	not detected	neutral pH needed	not detected	variation in pH (5 – 9) does not affect result
<b>Swabs recovery***</b>	2 µg almond	0.5 µg $\beta$ -Lactoglobulin	5 µg brazil nut	1 µg casein	2 µg cashew/ pistachio	10 µg dried coconut	10 µg crustacea (wet)	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.

\*\* According to the U.S. Department of Agriculture FoodData Central database (fdc.nal.usda.gov). This is a theoretical approximation only. Allergenic materials might differ greatly in their protein content.

\*\*\* Swabbing area is 25 cm<sup>2</sup>.

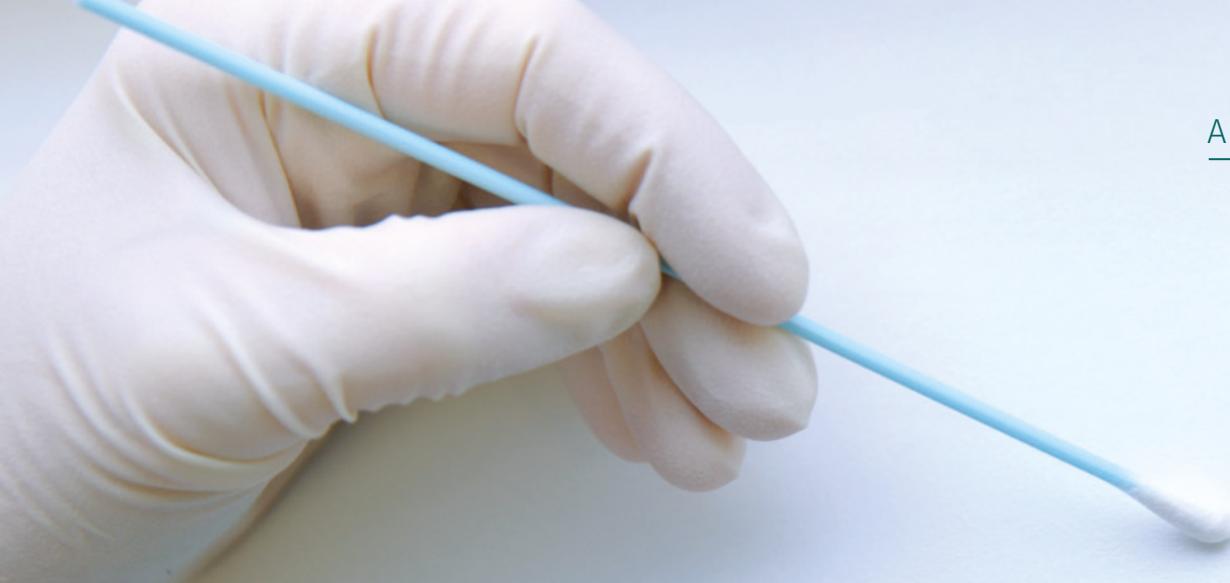


## Validation data of AgraStrip® Pro Allergen Test Kits – Overview

	<b>Hazelnut</b>	<b>Lupin</b>	<b>Macadamia Nut</b>	<b>Milk</b>	<b>Mustard</b>	<b>Peanut</b>	<b>Sesame</b>	<b>Soy</b>	<b>Walnut</b>
<b>Cut-off</b>									
<b>Adjusted cut-off**</b>	5 ppm hazelnut	10 ppm lupin	2 ppm macadamia nut	1 ppm milk protein	2 ppm mustard	1 ppm peanut	5 ppm sesame	2 ppm soy	5 ppm walnut
<b>Cross-reactivity</b>	0.7 ppm protein	3.6 ppm protein	0.2 ppm macadamia	-	0.5 ppm protein	0.3 ppm protein	0.9 ppm protein	0.8 ppm protein	0.8 ppm protein
<b>Effect of the extract pH</b>	pecan (expected to walnut), almond and rapeseed.	Possibly to pure rye	no cross-reactivity with samples tested	no cross-reactivity with samples tested	Rapeseed and possibly rye and wheat	Expected cross-reactivity with green peas and white beans	no cross-reactivity with samples tested	no cross-reactivity with samples tested	pecan nuts
<b>Swabs recovery***</b>	neutral pH needed	neutral pH needed	neutral pH needed	not detected	neutral pH needed	not detected	neutral pH needed	neutral pH needed	not detected

\*\* According to the U.S. Department of Agriculture FoodData Central database ([fdc.nal.usda.gov](http://fdc.nal.usda.gov)). This is a theoretical approximation only. Allergenic materials might differ greatly in their protein content.  
 \*\*\* swabbing area is 25 cm<sup>2</sup>





## Assay Principles

The AgraStrip® Pro 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® Pro Allergen test kits can also be used to validate and monitor cleaning procedures using rinse waters and environmental swabs samples. They are easy to use, fast and reliable.

### Hook-Effect

The AgraStrip® Pro Allergen Test kits are designed for the detection of trace amounts of allergens. If the sample contains a large percentage of the respective allergen, e.g. more than approx. 1% (10,000 ppm) of the allergen, the test may return a false-negative result. This percentage varies with the kit. Check the detection ranges in the respective Product manuals for more information.

### 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® Pro 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® Pro 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® Pro Allergen Test kits contain swabs for environmental sample collection.

#### Each Test kit includes\*:

- 1 Tube containing 15 AgraStrip® Pro Allergen test strips
- 1 Bottle of ready-to-use extraction buffer
- 15 Extraction tubes and caps
- 15 Sterile swabs with pre-scored tips
- 15 Incubation vials in a foil pouch
- 1 Vial rack
- Package Insert

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

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

In cooperation with:

