

# AlerTox® Sticks

## Rapid Peanut Allergen Detection

Limit of detection: 1 ppm

Pack size: 5 or 10 tests



## Intended use

AlerTox Sticks Peanut is an immunochromatographic rapid test for the qualitative detection of peanut antigen in food, kitchens and production facilities.

## Introduction

Peanut (*Arachis hypogaea*) is a legume of the *Fabaceae* (also known as *Leguminosae*) family, which includes bean, pea, chickpea, alfalfa and lupin.

Peanut allergy can display a variety of symptoms, from mild oral allergy or hives to severe life-threatening systemic reactions, i.e. anaphylactic shock or bronchial asthma. Peanut-induced anaphylaxis is considered the most fatal among all food allergies. Allergy to peanuts affects more than 0.5% children in the general population.

The Food Allergen Labeling and Consumer Protection Act (FALCPA) identified peanut allergy as one of the major food allergies, and the presence of peanut must be labeled on the package. In the EU, peanuts are included in the list of allergens established by the European Food Safety Authority, whose presence must be indicated on the label according to Regulation (EU) No. 1169/2011 Annex II.

## Test sensitivity and specificity

AlerTox Sticks Peanut uses a monoclonal antibody against a major peanut antigen, the 11 S globulin seed storage protein known as allergen Ara h 3. AlerTox Sticks Peanut does NOT detect the antigens of cereals, other legumes and tree nuts including pecan, walnut, hazelnut, almond, macadamia, pistachio, cashew, brazil nut, chestnut, pine nut and coconut.

The LOD (limit of detection) of AlerTox Sticks Peanut is 1 ppm of raw or roasted peanut protein. The range of detection (ROD) is 1-10000 ppm of peanut protein. Above this range, reduction of test line intensity due to hook effect can result in a false negative result. If a false negative due to hook effect is suspected, repeat the test on a diluted sample.

**Testing acidic samples (e.g. orange or lemon juice) can produce false positive results.**

The LOD of AlerTox Sticks Peanut for surface analysis is approximately 4 ug of peanut protein/16 cm<sup>2</sup> on a model, dry surface (stainless steel), sampled with a wet swab.

If you need to quantify the amount of antigen, please acquire AlerTox ELISA Peanut (KIT3048).

## Kit contents

- 10 immunochromatographic sticks, in a tube
- 10 sample collection tubes (tube with yellow cap)
- 10 sample extraction buffer tubes, 9 mL (tube with blue cap)
- 10 spoons
- 10 pipettes (3 mL- only for testing liquid samples)
- 10 small pipettes
- 10 swabs (only for testing surfaces)
- Instructions for use (download from webpage)

## Other materials not supplied

- Grinder, mortar or any other manual or automatic homogenization system to crush the sample
- Scissors
- Optional: digital scale sensitive to 0.1 g

## Precautions

- The tube with the test sticks must be stored at a temperature between 10 °C and 30 °C (50 °F and 86 °F).
- Open the tube with test sticks, take out the number of sticks necessary and close the tube immediately.
- Always manipulate the sticks by holding them by their BLUE end. Do **NOT** touch the white end of the sticks.
- All the components of the test kit are disposable; do not reuse them or combine components from different kits.
- Do not use the test sticks beyond the expiry date.

## Sample handling

The samples must be brought to a temperature between 18 °C and 35 °C (64.4 °F and 95 °F) before use. The test is designed to detect the target antigen in:

- Solid food.
- Liquid samples: beverages, washwater from cutting equipment and surfaces used in food processing and storage.
- Surfaces.

## Validation

AlerTox Sticks Peanut shows no detectable cross-reactivity or interference with the following commodities:

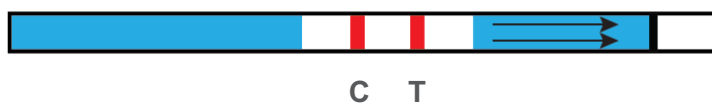
- **Cereals:** barley, buckwheat, wheat, rice, rye, oat, corn.
- **Legumes and vegetables:** soybean, green pea, lima (butter) bean, chickpea.
- **Seeds:** sunflower, pumpkin, sesame, poppy.
- **Tree nuts:** almond, brazil nut, cashew, chestnut, coconut, hazelnut, macadamia, pistachio, pecan, pine nut, walnut.
- **Other:** skim milk powder, cocoa, lecithin, porcine gelatin.

AlerTox Sticks Peanut has been validated in the following matrices:

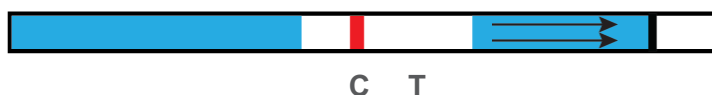
- Butter cookies, cow milk, yogurt, ice cream (vegan), soy milk, soy sauce, pâtè, cornstarch.

## 11. Interpretation of results

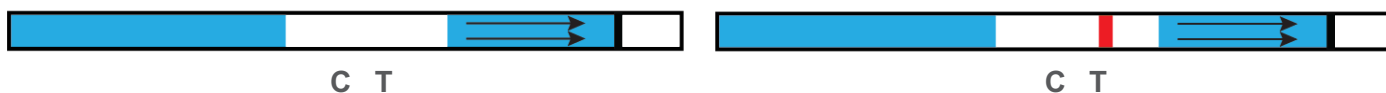
The result of the test is POSITIVE if TWO colored lines appear: One in the control zone (C) and one in the test zone (T).



The result of the test is NEGATIVE if only ONE colored line is clearly visible, in the control zone (C).



If NO colored line appears in the control zone (C), the test is INVALID.



In the case of an invalid test, repeat the test with another stick, check the correct specimen handling and test procedure, expiry date and storage conditions. Contact your distributor for further details.

### IMPORTANT NOTE!

- **AlerTox Sticks is a qualitative test intended for the screening of samples for internal quality control. Under no circumstances can it replace the quantification test of the laboratory analysis.**

## 12. Validation

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- Butter cookies, cow milk, yogurt, ice cream (vegan), soy milk, soy sauce, pâtè, cornstarch.