

Agitest™ Food Allergen Rapid Test Strip

Instruction Manual – PEANUT

1. Brief Information

Agitest™ PEANUT Food Allergen Rapid Test is an immunochromatographic test for the detection of peanut in food. All reagents required for the test are included in the test kit. Results are interpreted visually. This test is suitable for the detection of unknown ingredient or ambiguous labeling in processed food. Agitest™ PEANUT Food Allergen Rapid Test can be used with Agitest™ Environmental Swab Kit (Product Number: SR00013220) to validate and verify allergen cleaning regimes in manufacturing and analytical environmental. This test is also suitable for food quality control in food processing plants specifically with inbound goods, processing stages and final product.

***Detection limit:**

0.1 ppm peanut protein isolation.

***Specificity:**

No cross-reaction with seafood, casein, soy, gluten, buckwheat, egg or almond.

2. Reagents provided

Each test kit contains

2.1	Rapid test strip	20 pouches
2.2	Buffer	65 mL, 1 bottle
2.3	Instruction manual	1 manual
2.4	Supplies:	
2.4.1	1.5 mL Microcentrifuge tube	20 pcs
2.4.2	4 mL Sample tube	20 pcs
2.4.3	Scoop	20 pcs
2.4.4	Dropper	20 pcs
2.4.5	Tubes Rack	2 pcs

3. Equipment/ materials required (Not provided)

- 3.1 20 – 200 µL and 1,000 µL Pipetmans (or can be replaced by droppers provided).
- 3.2 Accurate weighing scale.
- 3.3 Grinder or homogenizer.
- 3.4 Timer.
- 3.5 Vortex mixer (if available).
- 3.6 Agitest™ Environmental Swab Kit (Product Number: SR00013220) (20 pieces).
- 3.7 Clean water.

4. Storage instructions

- 4.1 Store the test kit between 2 to 30 degrees Celsius.
- 4.2 Keep away from direct sunlight.
- 4.3 Do not freeze.

5. Warnings and precautions for users

- 5.1 Agitest™ products are for food testing and *In Vitro* diagnostic use only, not for human use.
- 5.2 Agitest™ products contain non-toxic buffers. To maintain test accuracy, please keep bottle upright to prevent leakage.
- 5.3 Agitest™ Rapid Tests are designed as a one-use test. Please do not re-use test strip.
- 5.4 Agitest™ Rapid Tests are very sensitive to humidity, which could render the test strips useless. Please keep the test strips away from humidity.
- 5.5 Agitest™ Rapid Tests are designed for screening purposes only. If analysis of ingredients is required, please send the sample to your local laboratory for further analysis.
- 5.6 To ensure test accuracy, please do not use expired test strips or omit the following steps include weighing samples or operating by pipetmans.
- 5.7 Airborne peanut powder and dirty equipment can lead to peanut contamination of the test strip and affect the results. In order to avoid cross-contamination during the operation, please clean equipment and surfaces with 75% ethanol before operating and wear gloves while performing the test to ensure detection accuracy.
- 5.8 All samples require dilution with the buffer in this kit. Do not test the sample directly with the test strip.
- 5.9 Highly concentrated samples and food samples containing high level of polyphenols (e.g. coffee, tea, wine, chocolate etc.), high fat volume (e.g. peanut butter, oil etc.) or heavy food colouring (e.g. soya sauce) will affect the results of the tests.
- 5.10 If the sample is too viscous or concentrated, it is recommended to increase the dilution factor of the sample with the buffer in this kit before testing.
- 5.11 Please complete the test procedure in 30 minutes.

6. Important notes

Time and different methods (e.g. boil and fry) of preparing peanuts may affect the detection of peanut allergens. Allergens are more easily degraded or undetectable with the longer cooking time, but it doesn't mean these food samples don't cause peanut allergies. (Kirsten B. et al. Effects of cooking methods on peanut Allergenicity. *J Allergy Clin Immunol* 2001; 107:1077-81.)

7. Preparation of samples

- 7.1 For liquid food/ drinks:
Measure 50 µL of sample with 450 µL buffer into a 1.5 mL microcentrifuge tube and mix well (the dilution

factor here is 1/10).

7.2 For solid food:

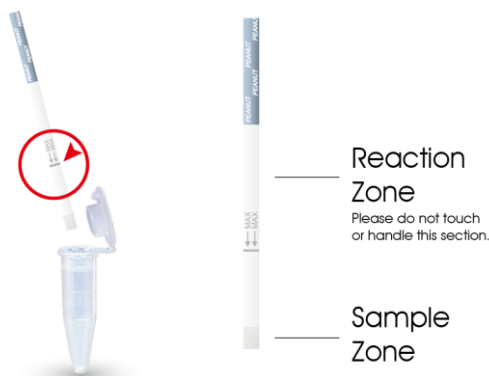
- 7.2.1 Weigh 0.3 g of sample (grind finely) or fill the sample up with scoop provided and then level it off.
- 7.2.2 Add with 3,000 µL buffer into a 4 mL sample tube (the dilution factor here is 1/10).
- 7.2.3 Vortex/ mix for 30 seconds.
- 7.2.4 Leave sample mixture to settle for 1 minute.
- 7.2.5 Measure 500 µL (or 15 drops by dropper) of the sample mixture supernatant into a 1.5 mL microcentrifuge tube.

7.3 Environmental swab test:

- 7.3.1 Transfer 500 µL (or 15 drops by dropper) of buffer into a 1.5 mL microcentrifuge tube.
- 7.3.2 Wet the cotton swab in the Agitest™ Environmental Swab Kit with clean water.
- 7.3.3 Swab the sample with the pre-wetted cotton swab. (A sampling surface area of 100 cm² is recommended.)
- 7.3.4 Place the cotton swab in the 1.5 mL microcentrifuge tube making sure to immerse the cotton swab head in the buffer.
- 7.3.5 Gently agitate the cotton swab in the buffer for at least 30 seconds. (Please avoid spilling the buffer.)
- 7.3.6 Remove the cotton swab from the 1.5 mL microcentrifuge tube and leave the tube to rest for 1 minute.

8. Test implementation

- 8.1 Open the alu-pouch and take out the test strip. (Please handle the coloured sticker portion only and avoid contact with the reaction zone).
- 8.2 Insert the test strip into the 1.5 mL microcentrifuge tube.



****Note: Do not allow liquid height to exceed the arrows****

9. Results and sensitivity

9.1 Wait 15 minutes for the results. Please read the results immediately without further manipulation.

9.2 Result analysis

- 9.2.1 **Positive result: two coloured bands** (the C and T red test bands) are visible within the reaction zone.
- 9.2.2 **Negative result: one coloured band** (the C red test band) is visible within the reaction zone.
- 9.2.3 **Invalid result: no coloured band** is visible within the reaction zone, the test is considered invalid.

*Please check the following:

- A. If the test strip packaging is damaged.
- B. If the test strip is damp.
- C. If the sample is too viscous or concentrated. Please retest with a new test strip.



***NOTE:**

- Please read test results within 30 minutes to ensure optimum accuracy.
- "Hook effect": Highly concentrated samples overload the test strip and weak band(s) will be visible.

9.3 Sensitivity calculation





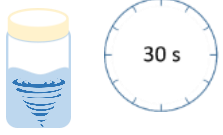
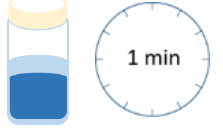
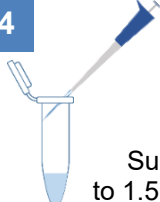


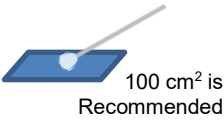
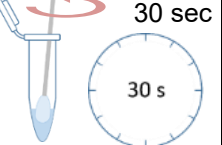

- 9.3.1 Sample after dilution, a dilution factor will need to be considered.
- 9.3.2 If the sample is further diluted, a dilution factor will need to be considered.

Agitest™ Peanut – QUICK GUIDE


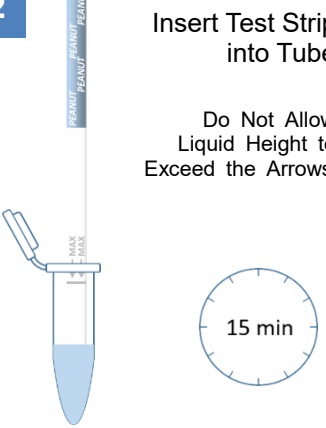
A. Materials Needed:

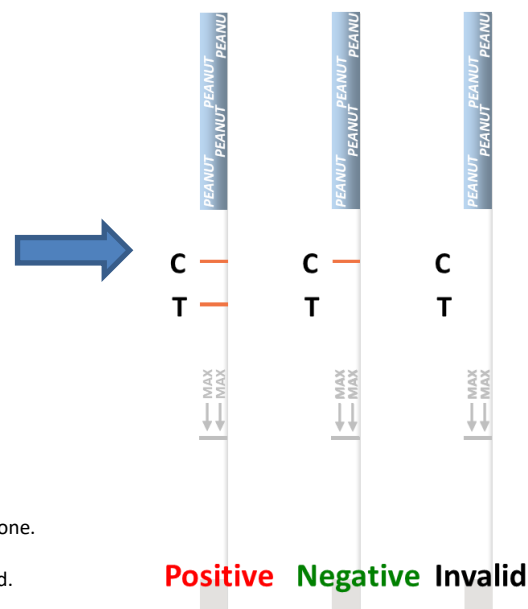
	Liquid Sample	Solid Sample	Environmental Swab Test
4 mL Sample Tube	•	•	
1.5 mL Microcentrifuge Tube	•	•	•
Pipetmans or Droppers	•	•	•
Scoop		•	
Swab (Optional)			•

B. Preparation of Samples

Liquid Sample	1  Transfer 450 µL Buffer	2  50 µL Liquid Sample + 450 µL Buffer	3  Vortex or Mix		
Solid Sample	1  0.3 g Solid Sample (Grind Finely) + 3,000 µL Buffer	2  Vortex or Mix 30 s	3  Settle Down 1 min	4  Pipette 500 µL Sample Mixtures Supernatant to 1.5 mL Tube	
Environmental Test	1  Transfer 500 µL Buffer	2  Wet the Swab with Clean Water	3  Swab the Sampling Surface 100 cm² is Recommended	4  Agitate the Swab for 30 sec	5  Remove the Swab and Settle Down 1 min

C. Strip Testing and Result Analysis

1  Remove Strip from Package	2  Insert Test Strip into Tube Do Not Allow Liquid Height to Exceed the Arrows 15 min
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Positive result: **two colored bands** (the C and T red test bands) are visible within the reaction zone.

Negative result: **one colored band** (the C red test band) is visible within the reaction zone.

Invalid result: **no colored band** is visible within the reaction zone, the test is considered invalid.

Positive **Negative** **Invalid**