

IPstrip Allergen Lateral Flow Tests Test Instruction – GLUTEN

Cat.No.: IP600098

1. General Information

IPstrip Gluten Lateral Flow Test is an immunochromatographic test for the detection of gluten 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. **IPstrip Gluten Lateral Flow Test** can be used with **IPstrip Swab Kit** (Product Number: IP600106) 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:**

Approx. 1 ppm gliadin corresponding to 2 ppm gluten.

***Specificity:**

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

2. General

In the document of Codex Alimentarius (ALINORM 08/31/26), gluten-free foods are defined as foods which having gluten content of less than 20ppm.

3. Reagents provided

Each test kit contains

- | | | |
|-----|------------------|-----------------|
| 3.1 | Rapid test strip | 20 pouches |
| 3.2 | Buffer A | 25 mL, 1 bottle |

Please add 40 mL Ethanol (>95%) before use

- | | | |
|-----|--------------------|-----------------|
| 3.3 | Buffer B | 12 mL, 1 bottle |
| 3.4 | Instruction manual | 1 manual |

3.5 Supplies:

- | | | |
|---|-----------------------------|--------|
| ■ | 1.5 mL Microcentrifuge tube | 20 pcs |
| ■ | 4 mL Sample tube | 20 pcs |
| ■ | Scoop | 20 pcs |
| ■ | Dropper | 20 pcs |
| ■ | Tubes Rack | 2 pcs |

4. Equipment/ materials required (Not provided)

- Ethanol (>95%)
- 20 – 200 µL and 1,000 µL Pipetmans (or can be replaced by droppers provided).
- Accurate weighing scale.
- Grinder or homogenizer.
- Timer.
- Vortex mixer (if available).
- **IPstrip Swab Kit** (Product Number: :IP600106 (20 pieces).
- Clean water.

5. Storage instructions

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

6. Warnings and precautions for users

- 6.1 **IPstrip** products are for food testing and *In Vitro* diagnostic use only, not for human use.
- 6.2 **IPstrip** products contain non-toxic buffers. maintain test accuracy, please keep bottle upright to prevent leakage.
- 6.3 Rapid Tests are designed as a one-use test. Please do not re-use test strip.
- 6.4 LFDs are very sensitive to humidity, which could render the test strips useless. Please keep the test strips away from humidity.
- 6.5 Tests are designed for screening purposes only. If analysis of ingredients is required, please send the sample to your local laboratory for further analysis.
- 6.6 To ensure test accuracy, please do not use expired test strips or omit the following steps include weighing samples or operating by pipetmans.
- 6.7 Airborne cereal dust and dirty equipment can lead to gluten 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.
- 6.8 All samples require dilution with the **buffer A** and **buffer B** in this kit. Do not test the sample directly with the test strip.
- 6.9 Highly concentrated samples and food samples containing high fat volume (e.g. peanut butter, oil etc.) or heavy food coloring (e.g. soya sauce) will affect the results of the tests.
- 6.10 If the sample is too viscous or concentrated, it is recommended to increase the dilution factor of the sample with **buffer A** in this kit before testing.
- 6.11 The **buffer A** should only be used for unheated food samples.
- 6.12 Please complete the test procedure in 30 minutes.

7. Preparation of samples

7.1 Liquid food/ drinks:

- 7.1.1 Measure 300 µL of sample with 2,700 µL **buffer A** into a 4 mL sample tube (the dilution factor here is 1/10).
- 7.1.2 Vortex/ mix for 30 seconds.
- 7.1.3 Leave sample mixture to settle for 1 minute.

7.1.4 Pipette 50 μ L sample mixture supernatant and 450 μ L **buffer B** into the 1.5 mL microcentrifuge tube.

7.1.5 Shake/ Mix for 10 seconds.

7.2 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 μ L **buffer A** into a 4 mL sample tube (the dilution factor here is 1/10).

7.2.3 Vortex/ mix for 30 seconds. Leave sample mixture to settle for 1 minute.

7.2.4 Pipette 50 μ L sample mixture supernatant and 450 μ L **buffer B** into the 1.5 mL microcentrifuge tube.

7.2.5 Shake/ Mix for 10 seconds.

7.3 Environmental swab test

7.3.1 Wet the Cotton swab with clean water.

7.3.2 Swab the sample with the pre-wetted Cotton swab. (A sampling surface area of 100 cm² is recommended.)

7.3.3 Transfer 500 μ L (or 15 drops by Dropper) sample **buffer A** into a 1.5 mL microcentrifuge tube.

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 as is for 1 minute.

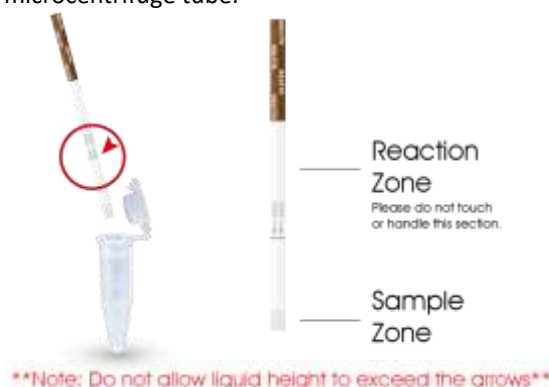
7.3.7 Measure 50 μ L sample supernatant and 450 μ L **buffer B** into an unused 1.5 mL microcentrifuge tube.

7.3.8 Shake/ Mix for 10 seconds.

8. Test implementation

8.1 Open the alu-pouch and take out the test strip. (Please handle the colored sticker portion only and avoid contact with the reaction zone).

8.2 Insert the test strip into the 1.5 mL microcentrifuge tube.



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 colored bands** (the C and T red test bands) are visible within the reaction zone.

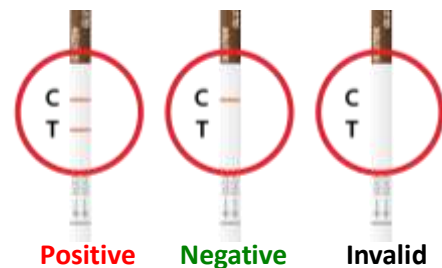
9.2.2 **Negative result: one colored band** (the C red test band) is visible within the reaction zone.

9.2.3 **Invalid result: no colored 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 re-test 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 A positive result indicates the diluted test sample has a gliadin content ≥ 1 ppm (gluten content ≥ 2 ppm). Therefore a 10-fold diluted test sample and a positive result are represented as a concentration of gluten ≥ 20 ppm in original sample.

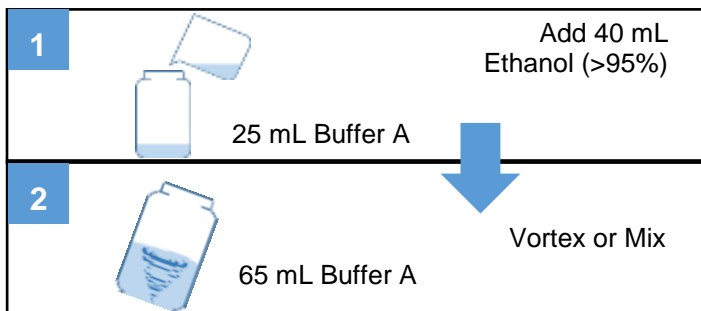
9.3.3 If the sample is further diluted, a dilution factor will need to be considered.

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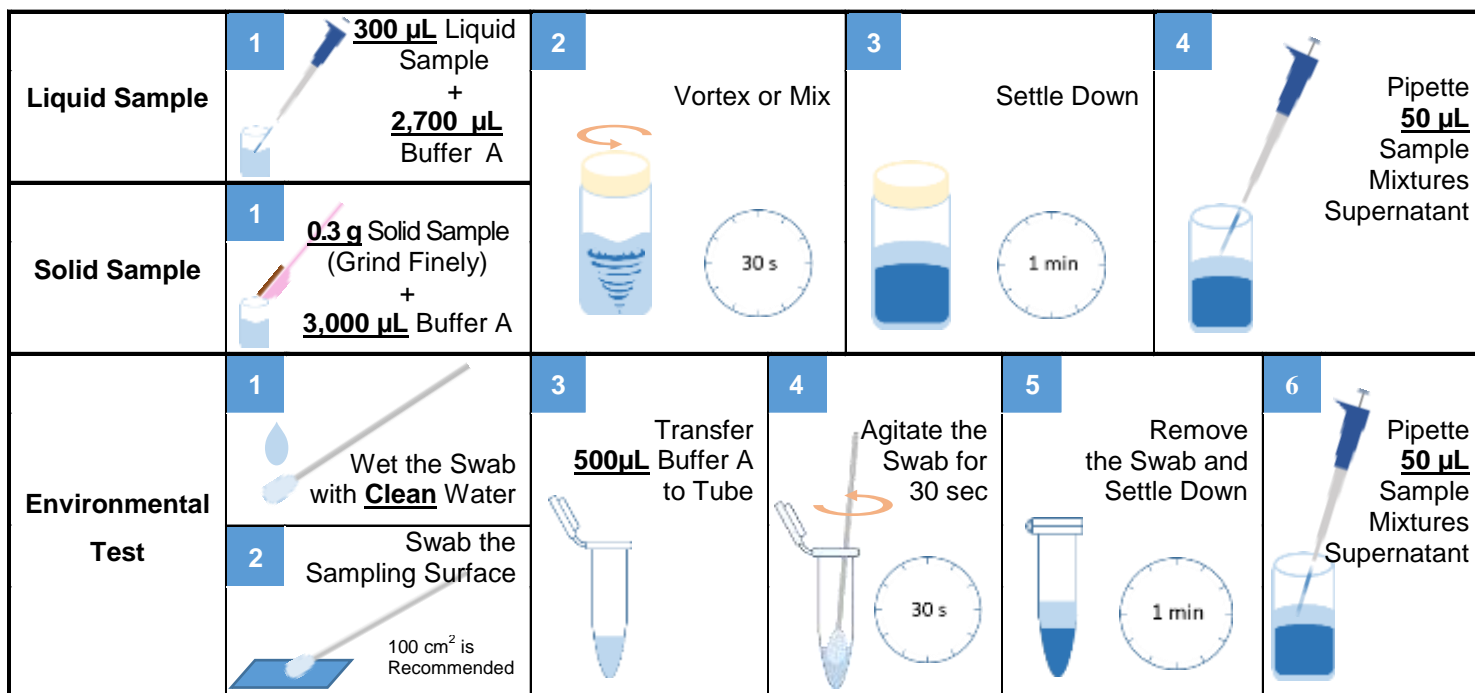
	Liquid Sample	Solid Sample	Swab Test
4 mL Sample Tube	•	•	
1.5 mL Microcentrifuge Tube	•	•	•
Pipetmans or Droppers	•	•	•
Scoop		•	
Swab (Optional)			•

A. Materials Needed:

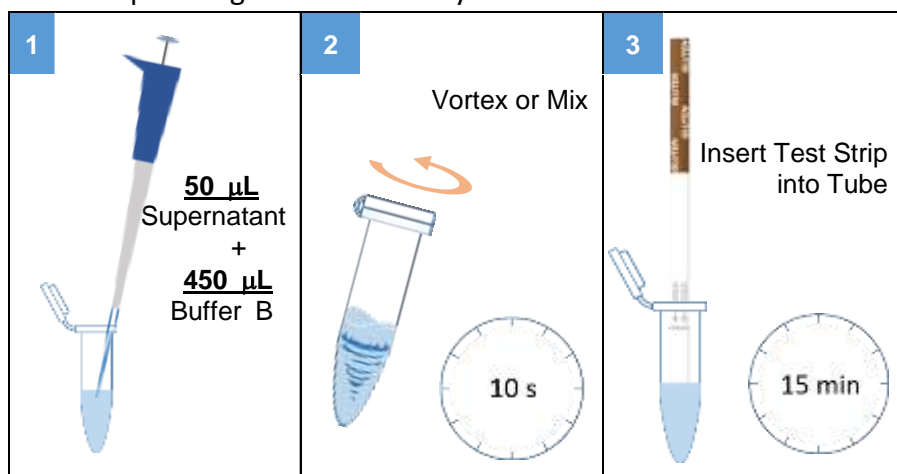
B. Before Use:



C. Preparation of Samples



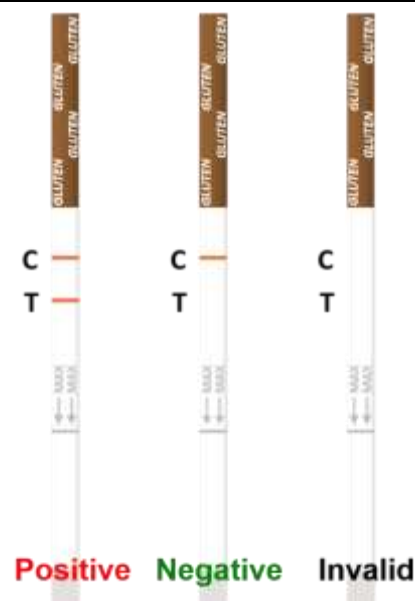
D. Strip Testing and Result Analysis



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.



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