Disp&FLOW® – Egg

Rapid test for the detection of specific protein

N° cat. : BIO.029.1

Number of test : 1

Rapid immuno-chromatographic test for the qualitative determination of egg in food, cooking utensils and preparatory surfaces in food production or processing facilities.

The Disp&FLOW – Egg test has been designed to detect the target antigen in two main types of specimens:

1. Solid food samples / solid food products / kitchen utensils / technical surfaces dedicated to the cutting or processing of foodstuffs.
2. Liquid samples of the following types: soups; beverages; rinsing water from food preparation tools, rinsing water from kitchen utensils, technical surfaces dedicated to cutting, processing and storing food products.

How it works

Eggs are widely used in foods and can be found in products that are not subject to mandatory labelling, or in preparations that are supposed to be egg-free. Traces of eggs can be found in certain vaccines, cosmetics and medicines.

The Disp&FLOW - Egg test is based on the principle of rapid immuno-chromatography (lateral flow migration). The target antigen present in the sample is absorbed by the strip and then recognized by specific antibodies conjugated to colored, free-moving microparticles. Once formed, this complex migrates along the strip to a highly focused area, where it encounters another specific antibody attached to the support. The accumulation of microparticles rapidly forms a colored line, indicating a positive result. The presence of a second control line ensures that the test works properly.

Test specificity and sensitivity

The Disp&FLOW - Egg test uses a pair of monoclonal antibodies specific for ovalbumin, the antigen found in eggs.
The sensitivity of the Disp&FLOW - Egg test is 0.1 milligram per kilogram in solid food preparations and 0.1 milligram per liter in liquid food preparations (0.1ppm).
The sensitivity of the Disp&FLOW - Egg test may be influenced by dilution, pre-heating, fat content of the sample and poultry species from which the egg is derived.
Detailed, up-to-date test performance data (sensitivity, specificity, variability, influence of matrix and processing) for the Disp&FLOW – Egg test can be requested via our messaging service info@biotem.fr.

If the test result is a weakly colored line or is difficult to interpret, BIOTEM recommends retesting the sample with a different method, such as quantitative ELISA or PCR.

Kit contents

The Disp&FLOW - Egg test contains the following components:

- A test strip packaged in a hermetically sealed foil pouch containing a desiccant.
- A sampling swab (surface test).
- A tube containing 3 ml extraction buffer for sample preparation and test migration.
- A transfer pipette
- Instructions for use

Storage and stability

- The kit should be stored between +2 and +30°C in a dry environment, away from direct sunlight.
- **The strips must not be frozen and should be kept in their hermetically sealed foil pouch.**
- The kit must be used before the expiration date indicated on the packaging.

Equipment required but not supplied

- Sampling spatula, preferably single-use.
- Pair of gloves

Precautions

- Kit components are for *in vitro* use only.
- The kit may be used up to its expiration date if stored under the recommended conditions.
- Do not use the test beyond its expiration date.
- Heat-sealed bags containing test strips should be stored between +2 and +30°C.
- All handling associated with the use of this test must be carried out in strict compliance with the conditions for non-contamination of samples; in particular, gloves must be worn during handling.
- Strips should be handled by their upper colored part. Do not directly touch the central part of the strip or its absorbent end.
- **Strips must be stored in their hermetically sealed foil pouch** (strips are highly sensitive to moisture) - do not use a strip more than 10 minutes after opening the pouch.
- Do not use the test if the foil pouch has been torn.
- Proceed with care when opening the foil pouch (see test procedure), to avoid cutting or damaging the test strip.
- Use only the tube containing the extraction buffer supplied in the kit. Never use components from different kits.
- **Do not immerse the strip deeper than the line under the arrows.**
- The Disp&FLOW - Egg test contains only single-use components; do not use again.

Waste disposal

- Dispose of all used consumables in accordance with biomedical waste regulations.
- Each user is responsible for managing the waste they produce, and for ensuring that it is disposed of in accordance with applicable regulations.

Sample preparation

Prior to testing, samples and test strips should be brought to a temperature between +18°C and +35°C; analysis of colder samples reduces test sensitivity; analysis of warmer samples is not possible due to the risk of degradation of the antibodies present in the strip.
Ensure that the material to be tested is a mixture of all the ingredients making up the final solid food product.

Liquid samples can be tested directly.
The test detection limit for liquid samples depends on their viscosity and turbidity (presence of particles). If the sample is viscous and cannot reach the test zone, it must be diluted in the dilution/extraction buffer. In this case, the sensitivity of the test must be adjusted by the dilution factor.
Cloudy specimens should be filtered through a textile or paper filter.

1. Take 1 mL of liquid sample (using a laboratory pipette) and place in the test tube.

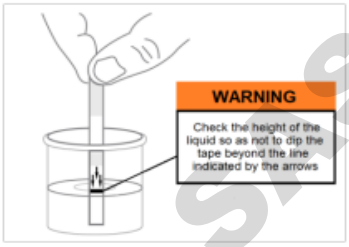
2. Hermetically seal the test tube with the stopper.
3. Vigorously shake the test tube manually or by vortexing at maximum speed for 20-30 seconds.
4. Place the tube upright on a stand and allow the tube contents to settle, or centrifuge at low speed in a centrifuge, leaving the supernatant ready for testing.

For testing solid materials, utensils or other surfaces, we recommend the following procedure:

1. Using clean, sharp tools (preferably disposable), cut and weigh a small piece **(0.1 to 0.5 g)** of the material to be tested and place it in the test tube.
2. For utensils or other surface tests, take the provided swab and run it over the surface of the object to be tested (paying particular attention to suspect spots). Swipe crosswise, first in one direction, then in the other, then diagonally. Return the swab to the test tube containing the dilution/extraction buffer and shake vigorously for 15-30 seconds.
3. Hermetically seal the test tube with the stopper.
4. Vigorously shake the tube manually or by vortexing at maximum speed for 25-30 seconds.
5. Place tube upright on a stand and allow contents to settle or centrifuge at low speed, the supernatant is then ready for testing.

Test procedure

1. Bring samples to a temperature between +18 and +35°C.
2. Remove the foil pouch (without opening it) and leave at room temperature for 5 to 10 minutes.
3. Open the pouch containing the test strip, taking care not to cut the strip.
4. Grasp the strip by the upper colored part and dip the other end vertically into the test tube supernatant. Caution: make sure the strip is not immersed too deeply - see picture opposite →



5. Leave the strip to soak for **20-30 seconds**, then place it on a CLEAN, horizontal surface; do not touch or move the strip for 10 minutes, while the sample migrates.

Read the result and interpret it according to the picture and instructions below.

Interpretation of results

The test is positive if 2 red lines appear clearly in the central area of the strip (test line and control line, see below). Disregard the order of appearance of the 2 lines and any nuances in color intensity.

The test is negative if a single red line appears (see below): this is the control line which guarantees that the test is working correctly.

If only the test line appears (see below), the test cannot be interpreted, and no result is validated.

If no line appears (see below), the test cannot be interpreted, and no result is validated.

In the latter two cases, before starting again with another Disp&FLOW - Egg, make sure that all the test preparation, storage and application instructions have been followed, as well as the expiration date.

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