

Fumonisin B1 (FB1) Rapid Test Kit

Technical Manual

(GICA)



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1 Principle and Application I

The test kit is used for detecting Fumonisin B1 (FB1) in various samples such as grains and animal feeds.

The kit is developed using the principle of competitive colloidal gold Immunochromatographic Assay (GICA). After the sample solution is added to sample hole, if FB1 is present, it will bind with gold labeled antibodies, thereby preventing the labeled antibodies from binding to the FB1 conjugates on the nitrocellulose membrane.

If the content of FB1 in the sample solution is less than detection limit, it will make the test ("T") line colored (The color is consistent with the control line or deeper) and the result is negative. If the content is greater than detection limit, no color reaction will be produced (or color is lighter than the control line) and the result is positive.

2 Technique Data I

Kit Sensitivity: 100ppb (ppb=μg/kg)

Detection Limits:

grains and animal feeds 200ppb

3 Kit Content I

Package specification	20T/Kit	50T/Kit
Test device (with disposable dropper)	20	50
FB1 Assay diluent	80mL×1	200mL×1
Instruction	1	1

4 Materials Required but Not Supplied I

4.1 Equipment: grinder (for crushing solid samples), vortex mixer (for shake and mix), centrifuge, graduated transfer pipette, and balance with a division value of 0.01 g.

4.2 Micropipettes: single-channel (20-200μL and 100-1000μL).

5 Sample Pre-treatment I

Please note that the labware must be clean. Use disposable droppers to avoid contamination of interference results.

5.1 Cereal, Feed:

1)Take representative feed and grain samples, each weighing more than 5 grams, and grind them (through a 20-mesh sieve). Accurately weigh 2 grams of the ground sample and place it in a 15 mL centrifuge tube.

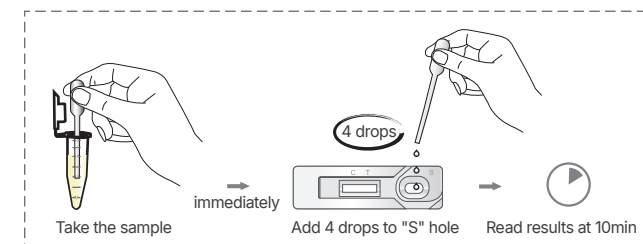
2)Accurately add 4 mL of the assay diluent to a 15 mL centrifuge tube. Seal the tube tightly with the stopper and shake vigorously for 3 minutes. Allow it to stand for 10 minutes or centrifuge at 4000 rpm for 5 minutes. The resulting supernatant is the test solution.

6 Test Steps I

1)Tear the foil pouch, take out of the test card, and put on a flat, clean work surface.

2)Pipette the prepared test solution with the provided dropper, then add 4-5 drops (approximately 120μL) vertically and slowly into the sample hole("S").

3)Assess the results at 10 minutes; any readings taken after 30 minutes are considered invalid.



7 Results Judgement I

Negative: Test

("T") line and

control("C") line

both appear in

the result

window. The

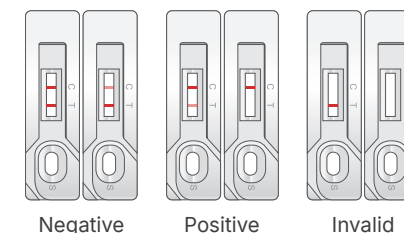
color of the test

("T") line is consistent or deeper than the control("C")

line. It indicates that the concentration of FB1 in the sample is below the detection limit, or absent.

Positive: In the result window, the control("C") line appears, while the Test("T") line does not appear or appears lighter in color than the control("C") line. It indicates that the concentration of FB1 in the sample is above the detection limit.

Invalid: If the control("C") line does not appear, the result might be considered invalid.



8 Notice |

8.1 Don't use the expired or damaged products.

8.2 When the test card is taken out of the refrigerator, it should be restored to the room temperature and then opened. The opened test card should be used as soon as possible to avoid failure after being affected by moisture.

8.3 Avoid touching the white nitrocellulose membrane in the middle of the detection card.

8.4 In order to avoid cross-contamination, the droppers cannot pipet another Solution after pipetting one.

8.5 The sample solution to be examined needs to be clear and free of turbid particles. Otherwise, it is prone to lead to blockage, non-obvious color development and other abnormalities, affecting the determination of the experimental results.

9 Storage Conditions |

The kit shall be stored at 2°C to 30°C (35.6°F to 86°F) in dry environment.

Shelf life: 12 months. The date of manufacture is presented in the label of the box.