Aflatoxin M1 (AFM1) Rapid Test Kit

Technical Manual

(GICA)

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1 Principle and Application

The test kit is used for detecting Aflatoxin M1 (AFM1) in various samples such as raw milk.

The kit is developed using colloidal gold immunochromatography assay (GICA) based on competition. After the sample solution is added to sample hole, if AFM1is present, it will bind with gold labeled antibodies, thereby preventing the labeled antibodies from binding to the AFM1 conjugates on the nitrocellulose membrane. The results are judged according to the contrast of color strength.

2 Technique Data

Detection Limit: 0.5 ppb (ppb=μg/kg)

3 Kit Content

Package specification	25T/Kit
Test device (gold-labeled well)	25
Assay Diluent (2ml)	1
Instruction	1

4 Materials Required but Not Supplied

Equipment: constant temperature device or centrifuge *(for frozen milk only. Fresh milk does not need to be handled).*

Micropipettes: single-channel (10-100μL)

5 Sample Pre-treatment

The temperature in the experimental environment must be above 20°C. The frozen milk is obviously granules, which is easy to cause the liquid to fail to reach the control(“C”) line. The sample should be heated to 40-50°C using a constant temperature device until fully dissolved (or you can centrifuge the sample and collect the intermediate layer for testing.).

Reminder:

1.Labware must be clean. Use disposable pipette tips to avoid contamination of interference results.

2.Repeated freezing and thawing of raw milk can lead to deterioration, thereby affecting the experimental results.

3.The fresh milk sample can be stored at 2-8°C for 24 hours to prevent invalidation or contamination if not assayed immediately.

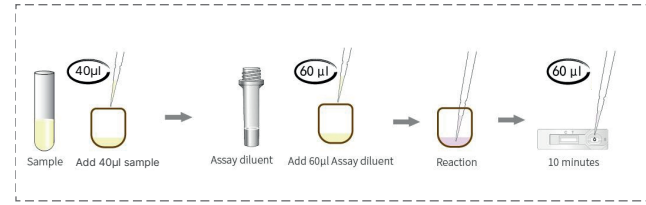
4.The testing is intended solely for raw milk; testing processed milk is not recommended.

6 Test Steps

1) Tear the foil bag, take out of the test card, gold-labeled well. Then put them on a flat, clean work surface.

2) Restore the prepared sample to room temperature (20°C-30°C), then add 40μL of milk sample and 60μL assay diluent into the gold-labeled well. Gently pipette up and down for 30 seconds to completely dissolve the red substance at the bottom of the gold-labeled well. Draw 60μL liquid from the gold-labeled well and transfer it to the sample hole(“S”) on the test card. Start the timer.

3) Results should be read at 10 minutes, and any readings taken after 30 minutes can only be considered as reference.



7 Results Judgement

Negative Range: 0.05ppb-0.2ppb Test(“T”) line appear dark and control(“C”) line appear light in the result window.

Negative

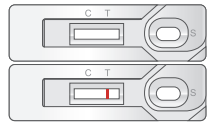
Negative Range: 0.2ppb-0.5ppb Test(“T”) line appear light and control(“C”) line appear dark in the result window.

Negative

Positive Range: >0.5ppb Test (“T”) line does not appear and control(“C”) line appear dark in the result window.

Positive

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



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 liquid after pipetting one.

8.5 The sample solution to be examined needs to be clear, free of turbid particles and without bacterial contamination. Otherwise, it is prone to lead to blockage, non-obvious color development and other abnormalities, affecting the determination of the experimental results.

8.6 Avoid direct sunlight and direct exposure to electric fans during testing. Avoid direct sunlight and direct exposure to electric fans during testing.

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.