Zearalenone Rapid Test Kit

Catalog No.: abx092051

Size: 20 tests / 50 tests / 80 tests

Detection Limit: Grain, Feed, Oil – 100 ng/ml (ppb); Dry Grain/Feed – 60 ng/ml

Storage: Store all reagents at 2 °C - 30 °C. Keep dry.

Application: For qualitative detection of Zearalenone in grain, feed, and oil.

Introduction and assay principle

Abbexa's Zearalenone Rapid Test Kit is based on the gold immuno-chromatography assay (GICA) principle. Any Zearalenone present in the samples combines with the colloidal gold particle-labelled Zearalenone antibody in the sample well, and the complex diffuses to the test area. The bound Zearalenone in the sample prevents the gold-labelled antibodies from binding to Zearalenone bound to the test area membrane. When the concentration of Zearalenone in the sample is more than the detection limit, there is no color change in the detection line and the result is positive. When the concentration of Zearalenone in the sample solution is less than the detection limit, there is a color change in the detection line and the result is negative.

Kit Components

- Test cassettes with pipettes

Material Required But Not Provided

- High-precision pipette and sterile pipette tips
- Centrifuge
- Deionized water
- Methanol
- N-hexane
- Nitrogen evaporator or water bath
- Timer

Reagent preparation

- **75% methanol:** Add methanol to deionized water at a 3:1 ratio to prepare a 70% methanol solution.

Sample preparation

- **Grain/Feed:** Add 2 g of crushed and homogenized sample into a 50 ml centrifuge tube, then add methanol according to the required detection limit, as listed in the following table.

Detection limit	100 ng/ml	200 ng/ml	400 ng/ml	500 ng/ml
Methanol	3 ml	6 ml	12 ml	15 ml

Mix fully for 5 minutes, then centrifuge at 4000 RPM for 5 minutes at room temperature. Take 0.15 ml of supernatant and add 0.85 ml of deionized water. Mix thoroughly, then take 60 µl of the lower liquid layer for analysis.

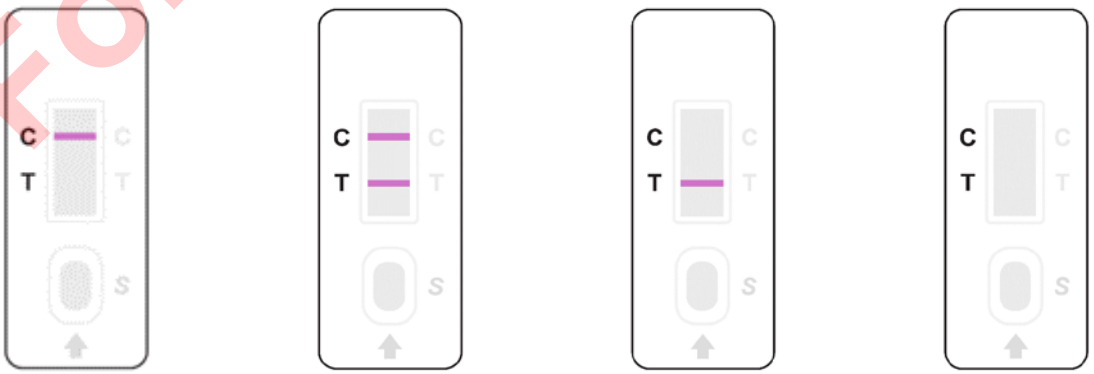
- **Wheat Bran Feed:** Add 2 g of crushed and homogenized sample into a 50 ml centrifuge tube, then add 5 ml of 75% methanol. Mix fully for 5 minutes, then centrifuge at 4000 RPM for 5 minutes at room temperature. Take 0.15 ml of supernatant and add 0.45 ml of deionized water. Mix thoroughly, then take 60 µl of the lower liquid layer for analysis. *Detection limit: 100 ng/ml.*
- **Dry Grain/Feed:** Add 2 g of crushed and homogenized sample into a 50 ml centrifuge tube, then add 4 ml of methanol. Mix fully for 5 minutes, then centrifuge at 4000 RPM for 10 minutes at room temperature. Take 1 ml of supernatant and dry using a nitrogen evaporator or water bath. Dissolve the residue in 0.45 ml of methanol. Take 0.15 ml of this solution and add 0.85 ml of deionized water. Mix thoroughly, then take 60 µl of the lower liquid layer for analysis. *Detection limit: 60 ng/ml.*
- **Oil:** Add 2 g of sample into a 50 ml centrifuge tube, then add 4 ml of N-hexane and 3 ml of methanol. Mix fully for 5 minutes, then centrifuge at 4000 RPM for 5 minutes at room temperature. Take 0.15 ml of this solution and add 0.85 ml of deionized water. Mix thoroughly, then take 60 µl of the lower liquid layer for analysis. *Detection limit: 100 ng/ml.*

Assay procedure

1. Take a test cassette and lay it flat on a clean table. Using the provided pipette, slowly and vertically add 2-3 drops (approximately 60 µl) of sample to the sample well on the test cassette. Avoid foaming.
2. Leave at room temperature for 8 - 10 min, then analyze the result.

Results analysis

- **Positive result**: A colored line is observed in the control (C) section but not the test (T) section.
- **Negative result:** A colored line is observed in both the control (C) section and the test (T) section.
- **Invalid result**: No colored line is observed in the control (C) section.



Positive **Negative** **Invalid** **Invalid**

Notes

1. The test cassettes should be brought to room temperature before use.
2. After opening the aluminum foil, use the test cassette as soon as possible.
3. Samples should be clear with no visible particles, turbidity or bacterial pollution.
4. Do not mix or re-use the disposable pipettes to avoid cross-contamination.
5. Avoid touching the cassette membrane through the sample well or test result window.
6. This kit is for qualitative detection of Zearalenone in grain, feed, and oil. For other sample types, a preliminary experiment is recommended to determine compatibility with this kit. Positive samples can be tested with another method (e.g. HPLC, LC/MS) for quantitative results.
7. This kit is for research use only and the results are for reference only. It is recommended to use this kit in conjunction with another detection method.
8. All waste should be disposed of appropriately. Please note that you may need to follow special waste disposal procedures for infectious samples. Please check local disposal regulations.