abbexa®

Deoxynivalenol (DON) Rapid Test Kit

Catalog No.: abx092052

Size: 20 tests / 50 tests / 80 tests

Detection Limit: Grain 500 ng/ml (ppb); Feed 500 ng/ml; Oil 250 ng/ml

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

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

Introduction and assay principle

Abbexa's Deoxynivalenol Rapid Test Kit is based on the gold immuno-chromatography assay (GICA) principle. Any Deoxynivalenol present in the samples combines with the colloidal gold particle-labelled Deoxynivalenol antibody in the sample well, and the complex diffuses to the test area. The bound Deoxynivalenol in the sample prevents the gold-labelled antibodies from binding to Deoxynivalenol bound to the test area membrane. When the concentration of Deoxynivalenol 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 Deoxynivalenol in the sample solution is less than the detection limit, there 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
- N-hexane
- Timer

Sample preparation

- **Grain/Feed:** Weigh 1 g of crushed and homogenized sample into a 50 ml centrifuge tube, then add 10 ml of deionized water. Mix fully for 5 minutes, then centrifuge at 4000 × g for 10 minutes at room temperature. Take 60 µl of supernatant for analysis. Dilute samples according to the required detection limit, as listed in the following table:

| Crushed sample	1 g	1 g	1 g	1 g
Deionized water	5 ml	10 ml	20 ml	40 ml
Dilution factor	5	10	20	40
Detection limit	250 ng/ml	500 ng/ml	1 µg/ml	2 µg/ml

- **Oil:** Weigh 1 g of sample into a 50 ml centrifuge tube, then add 4 ml of N-hexane and 5 ml of deionized water. Mix fully for 5 minutes, then centrifuge at 4000 × g for 10 minutes at room temperature. Discard the supernatant, take 60 µl of the lower liquid layer for analysis.

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.
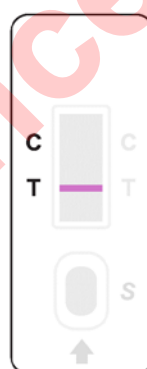
Results analysis

- **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.
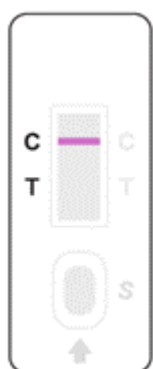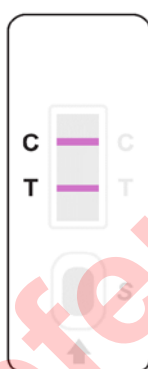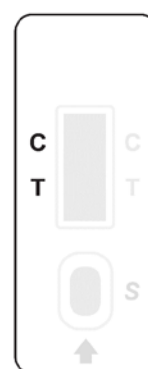

| Positive | Negative | Invalid | Invalid |

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. Do not use water, PBS, or similar solutions as the negative control.
6. Avoid touching the cassette membrane through the sample well or test result window.
7. This kit is for qualitative detection of Deoxynivalenol 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.
8. 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.

9. 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.