# Deoxynivalenol (DON) Qualitative Rapid Test Strip

**Product Code:** CUS-G16A

## 1. Assay Principle

The Deoxynivalenol (DON) Qualitative Rapid Test Strip is used for rapid onsite screening because it is convenient to use, provides rapid results and high sensitivity. Antigen is fixed on nitrocellulose membrane test area, which is called T-line. Secondary antibody is fixed on control area which is named C-line. Antibody conjugated with gold nanoparticles is fixed in microwell. If T-line does not change colour, then it means positive result; If T-line appears red, then it means negative result. C-line shall turn red no matter if there is DON in sample or not. It is suitable to detect DON in some feed and feedstuff: corn, sprayed corn husk, corn germ meal, corn gluten meal, pulping germ meal, CDDG, DDGS, wheat, wheat middling, flour, livestock feed, soybean meal, bran and etc.

## 2. Detection Rang

500-3000 ppb

## 3. Kit Contains

| Product Name | QTY |
|---|---|
| Rapid Test Strip | 96 Tests (8pcs/vial, 12 vials) |
| 40% Ethanol | 2400mL |
| Sample Diluent | 50mL × 4 bottles |
| 200uL Tips | 100pcs |
| 2mL Centrifuge Tube | 100pcs |
| Manual | 1pcs |

## 4. Required For Test but Not In Kit

- Mycotoxin LFD Incubator– **Part # CUSFY-1**
- Electronic Balance – **Part # BPS-6002C**
- Centrifuge – Part **# CUS-D1008E**
- Centrifuge Tube 50ml – **Part #MBC2603-B**
- 50mL Graduated Cylinder - **Part # SC-55303**
- Pipettor (20-200uL) – **Part # MBP5200-200U**
- Pipettor (100-1000uL) – **Part # MBP5200-1M**
- Pulverizer **– Part # CUS-CG-7120**

## 5. Application

It is suitable to detect DON in some feed and feedstuff: corn, sprayed corn husk, corn germ meal, corn gluten meal, pulping germ meal, CDDG, DDGS, wheat, wheat middling, flour, livestock feed, soybean meal, bran and etc. Contact Scigiene regarding other materials.

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## 6. Storage

Store at 2-8℃.

## 7. Expiry Date

Expiry Date is one year.

## 8. Preparation before Test

1) Sample Preparation

40% Ethanol: Add 40mL absolute ethyl alcohol into 60mL distilled water and mix well.

2) Product Preparation

Equilibrate Rapid Test Strip and Sample Diluent until they reach at room temperature. If you do not use eight microwells, then put back the rest and cover and seal well.

3) Incubator Preparation

Add clean water into striped sink of Incubator until it reaches to 2/3 depth. Set Incubator Temperature at 40℃. Then let down the cover and incubate at 40℃ for ten mins at least.

## 9. Sample Preparation

9.1) Add 100g representative samples, pulverize and pass 20 mesh sieve.
9.2) Add 5g pulverized sample into 50mL Centrifuge Tube and then add 25mL 40% ethanol. Shake it vigorously for two mins at least.
9.3) Centrifuge at 4000r/min for five mins or filter by filter paper.
9.4) Dilution

**A. 500ppb:** Add 200uL supernatant and add 600uL sample diluent. Mix well.

**B. 1000-3000ppb:** Add 50uL supernatant and add suitable amount of sample diluent according to limit of detection as listed below. Mix well.

| Limit of Detection (ppb) | 1000 | 1500 | 2000 | 2500 | 3000 |
|---|---|---|---|---|---|
| Amount of Sample Diluent (uL) | 350 | 630 | 870 | 1100 | 1300 |

## 10. Key Notes

Do not use test strip, microwell and Sample Diluent from other batches.
Load too much or too little sample and it will influence result.
Do not touch test strip display area (T/C Line). Avoid direct sunlight or direct blow from fan.
It is disposable. Do not use it again.

## 11. Test Procedure

1) Pull transverse baffle of Incubator to outermost place. Put required microwell on hole of incubator, and then put corresponding test strip on guide slot of incubator (please refer to Chart 1).
2) Before adding the sample, turn the test solution upside down to mix it well. Transfer 100uL of test solution into microwell. Slowly add and then extrude solution over five times to mix well. Lay down Incubator Cover, then wait for reaction for four mins.
3) Push transverse baffle to let test strip fall into microwell to start reaction.
4) Wait for reaction of five mins and then discard sample pad and lay the test strip horizontally to get result. Result is invalid if reaction is over ten minutes.

**Do not take off Incubator Cover nor let water in Striped Sink become dry during test!**

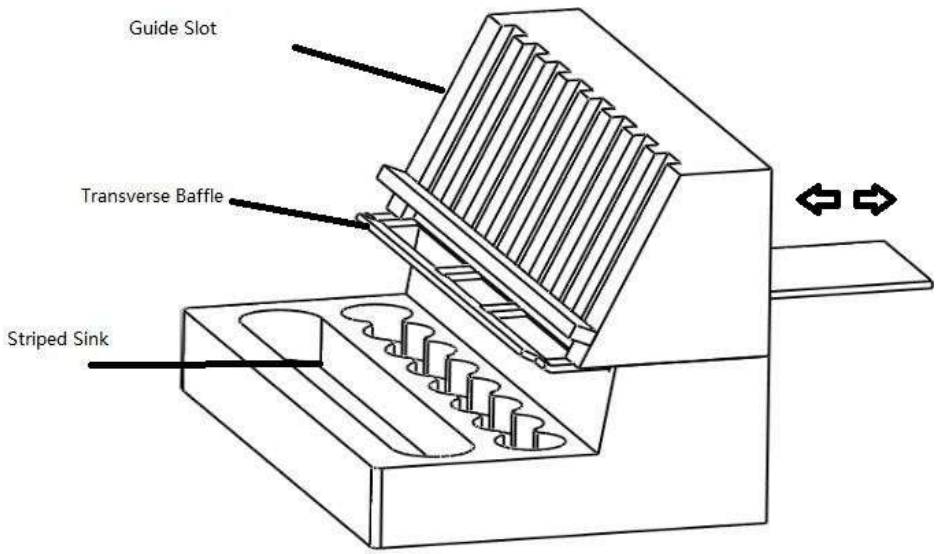
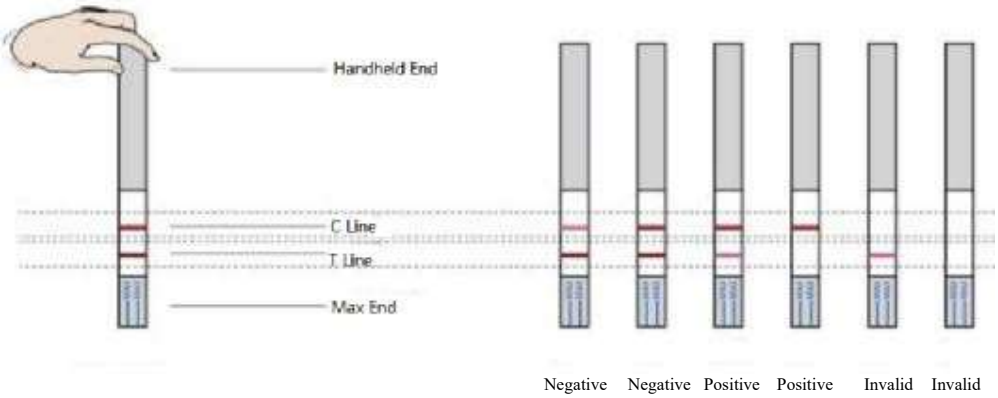



Chart 1: Incubator

## 12. Result Analysis




Negative (-): T line is darker or similar to C line. It means DON concentration in sample is below LOD.

Positive (+): C line turns color, but T line does not turn color.

Invalid Result: C line has not changed or both lines (T&C) have not changed, which means incorrect operation or invalid test strip. Please read the manual again and test with new test strip.

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