Zearalenone (ZEN) Qualitative Rapid Test Strip

Product Code: CUS-G17A

1. Assay Principle

The Zearalenone (ZEN) 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 ZEN in sample or not. It is suitable to detect ZEN some feed and feedstuff: corn, sprayed corn husk, corn germ meal, corn gluten meal, pulping germ meal, CDDG, wheat, flour, livestock feed, soybean meal and etc.

2. Detection Range

60-1500 ppb

3. Kit Contains

Product Name	QTY
Rapid Test Strip	96 Tests (8pcs/vial, 12 vials)
40% Ethanol	2400mL
Sample Diluent	500mL x 1 bottle
1000uL Tips	100pcs
200uL Tips	100pcs
10mL Centrifuge Tube	100pcs
Manual	1pcs

4. Required For Test but Not In Kit

- Mycotoxin LFD Incubator– **Part # CUSFY-1**
- Electronic Balance – **Part # BPS6002C**
- 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 ZEN some feed and feedstuff: corn, sprayed corn husk, corn germ meal, corn gluten meal, pulping germ meal, CDDG, wheat, flour, livestock feed, soybean meal and etc. Contact Scigiene regarding other materials/

6. Storage

Store at 2-8℃.

7. Expiry Date

Expiry Date is one year.

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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 appropriate 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

Limit of Detection (ppb)	60	100	200	300
Dilution Step	Add 50uL supernatant and then add 720uL Sample Diluent	Add 50uL supernatant and then add 1250uL Sample Diluent	Add 30uL supernatant and then add 1550uL Sample Diluent	Add 30uL supernatant and then add 2300uL Sample Diluent

Limit of Detection (ppb)	400	500	1000	1500
Dilution Step	Add 30uL supernatant and then add 3100uL Sample Diluent	Add 30uL supernatant and then add 3850uL Sample Diluent	Add 20uL supernatant and then add 5150uL Sample Diluent	Add 20uL supernatant and then add 7750uL Sample Diluent

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 air flow 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. Take 100uL of test solution into microwell. Slowly add and then extrude solution over five times to mix it 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 abandon 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!

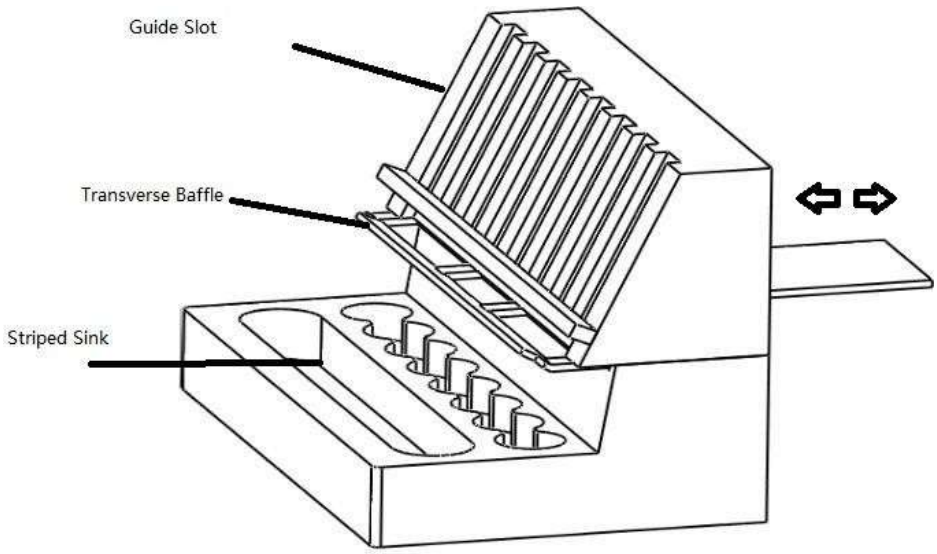
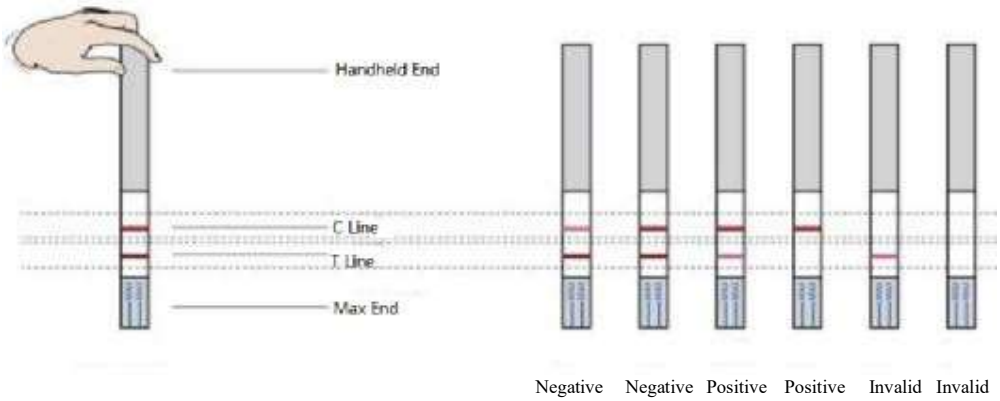


Chart 1: Incubator

12. Result Analysis



Negative (-): T line is darker or similar to C line. It means ZEN concentration in sample is belowLOD.

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.