Zearalenone Rapid Test Kit

Art. No.: 600001-96T

The rapid test strip detection technology utilizes the principle that the receptor can specifically bind to the ligand, but does not bind to the non-ligand, and the drug residue to be detected is used as a ligand, then the receptor with high specificity is screened out. The binding of the test substance to the receptor surface binding site is examined to detect the drug residue in the sample. Receptor ligand detection technology uses the drug residue to be tested as a ligand, and the specific recognition of drug residues in the sample is skillfully solved by different color changes in different concentrations. The rapid detection strip based on this principle can identify the parent ring of the drug with high specificity and high affinity. In addition, it has more cross-reaction than the antigen-antibody technology for the same drug, and has high specificity, high sensitivity, strong stability and very strong anti-interference ability.

1. Application

This kit can be used to qualitative detect zearalenone in cereal, feed, nut and cereal beverage.

2. Detection Limit (LOD) : 60ppb

3. Kit components

- Test Strip, 96 pcs in 12 plastic bottles, 8 pcs / bottle.
- 1 manual
- Zen concentrated diluent (10x), 15ml*2
- Reader (optional)

4. Instruments and reagent required but not provided

Reagent: 70% ethanol (70ml ethanol + 30ml DI water)

Instruments: pulverizer, centrifuge

5. Sample pretreatment

- **Preparation of ZEN dilute solution**

  Restore ZEN concentrated diluent (10 x) to room temperature, make sure the precipitated crystals are completely dissolved before use. (Sample buffer**:** Take NaCl 16g, Na2HPO4 10.32g, NaH2PO4 1.98g, 2ml tween-20, dissolve with 100ml deionized water or distilled water.)

  Dilute ZEN concentrated diluent (10 x) with deionized water in ratio of 1:9, blending, work as the ZEN diluent, 2-8 ^{0}C saved for later use.

- **Preparation of raw material (cereal, feed, cotton seed and nut)**

  10 g of cereal is ground into a power, then weight **5g** (accurate to 0.01g) and place in a centrifuge tube. Herein, **20 ml** ethanol (70%) is added and mixed for 2 minutes, then centrifuged for 5 minutes at 6000rpm. Lastly, mix **50 µl** of the sample supernate and **950 µl** of the ZEN diluent then get the sample solution.

6. Operations

a) Please read the operating instructions carefully before the experiment. Bring the test kit and samples to room temperature.

b) Remove the reagent bucket from the original packaging, then open it, remove the required number of microwell reagents and test strips, and mark them. Please use it as soon as possible within 60min. Immediately after removing the test reagent, cover the reagent lid.

c) 200 µl of the sample solution was absorbed then tested into the microwells with a micropipette, slowly aspirate and mix well with the reagents in the microwells.

d) After incubating for **5 min at room temperature (20-25 ºC)**, insert the labeled test strip into the microwell, allow it to fully immerse into the solution.

e) After incubating for **5 minutes at room temperature (20-25 ºC)** again, the test strip was taken out and judged according to the schematic diagram, and the other conditions was judged to be invalid.

7. Result Determination

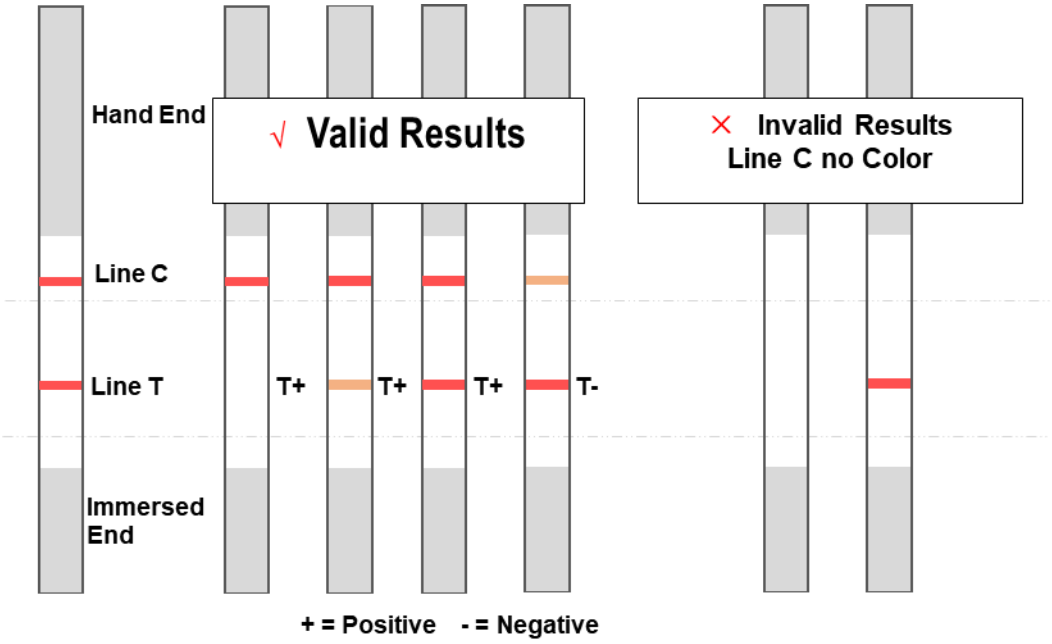
Negative (-): Both the C and T lines are colored, and the T line is stronger than the C line, indicating that the concentration of zearalenone in the sample is below the detection limit.

Positive (+): T line color is the same as C line, T line color is weaker than C line or C line is colored and T line is not color, which means that the concentration of zearalenone in the sample is equal to or higher than the detection limit.

Invalid: The C line does not appear, indicating that the incorrect operation process or the test strip has deteriorated. In this case, read the instructions carefully and retest with a new test strip.

If the test strip needs to be recorded, please cut off the lower sponge pad immediately after the interpretation and dry it for archiving.

Remarks: In addition to the naked eye interpretation, you can use a special reader to make the result interpretation.



8. Specificity

The results are all negative when test vomitoxin, fumonisins, ochratoxin, T-2 toxin and aflatoxin B1 with the concentration of 500 μg/kg.

9. Storage

2-8°C in cool dark place, do not freeze. The kit is valid for 12 months. Lot No. and expired date are printed on the package.

10. Notice and Precautions for a successful experiment.

- Please test follow the operation steps. Do not touch the color zone of the strip.
- Immediately after the test reagent is removed, cover the reagent bucket lid. If you can't use 8 microwells at a time, immediately cover the remaining microwells with a microwell lid and put it back in the reagent bucket for sealed storage. When one bucket is used up, open another bucket to protect it from moisture.
- Do not mix test strips and microwell reagents with different batch numbers.
- This test strip is a one-off product and should not be reused.
- The test results of this product are for reference only. If you need to confirm, please refer to the relevant national standard methods.

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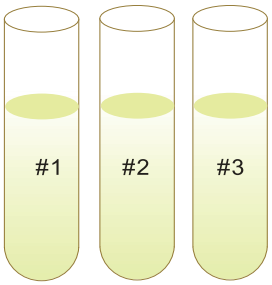
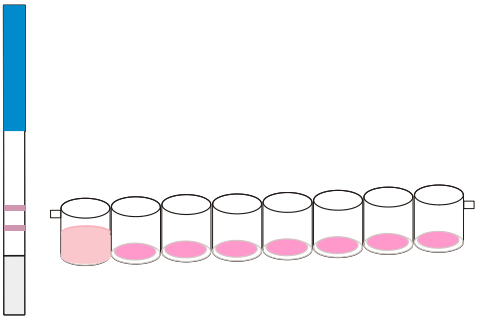
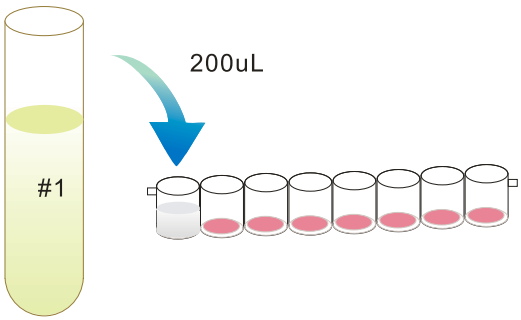
Schematic Assay Steps

1. Bring all test samples to room temperature; number them to keep record.

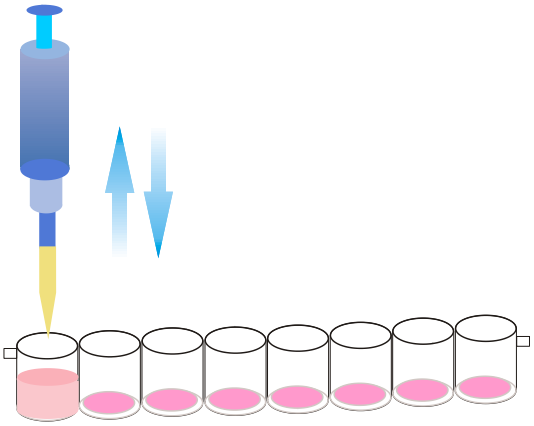


2. Take test kit according to your sample number and also number the kit wells to keep record and consistency.

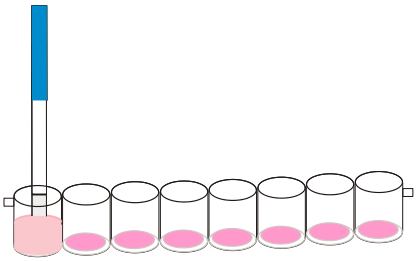




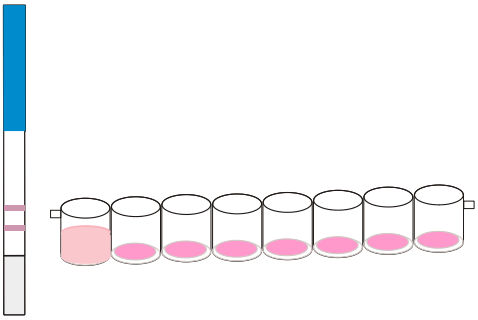
3. Take 200ul sample into the wells using pipet. You can also then put the well into the well holder to avoid sample spill.



4. Absorb up and down for 5 times to mix sample with reagent completely. Start the timer when the mixture is pink. **Incubate for 5 min.**



5. Insert the "**Immersed**" end of the strip into the mixture; **Incubate for 5min at room temperature again.**



6. Take out the strip; judge the result according to **kit instruction.**

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