Aflatoxin B1 rapid test strip

Catalog No. LSY-20006

1. Brief

This product is used for testing Aflatoxin B1 residue in grain, feed and edible oil sample, suitable for on-site rapid test. Easy to operate, high sensitivity.

2. Detection limit

5.0ng/g（5.0ppb）~50ng/g（50ppb）

3. Specifications: 50 tests/kit

4. Principle

The Aflatoxin B1 rapid test strip is an immuno-chromatographic test, using colloidal gold immunoassay method. It relies on the competition between Afla toxin B1 residues in the sample and the Aflatoxin B1 on T line, to the limited amount of dye-antibody. As a sufficient amount of drug in the sample is presenting, the drug will saturate the antibody. C onsequently, it will show an extremely light or even invisible T line, indicating a positive result. On the oth er hand, if there is a negative sample (or the amount of the drug is lower than the minimum detectable co ncentration), it will generate two obvious lines in both the T and C line section.

5. Contents

1) Test card   50 pieces
2) Manual   1 piece
3) Dropper   1 piece/bag
4) Desiccant   1 piece/bag
5) Disposable gloves   3 pieces
6) Sample diluent   1 bottle

6. Material required but not provided

Equipment: Balance, centrifuge, nitrogen-drying device (or hair drier), Micropipette, Vortex (optional).

Consumables: 50ml centrifuge tube, disposable tips, Ethyl acetate, n-hexane etc.

7. Sample preparation

7.1 Grain (Rice, corn etc.)

1) Weigh crushed grains 3±0.05 g into 50ml centrifuge tube, add 8ml Ethyl acetate, shake vigorously by h and or Vortex for 5 min, centrifuge at 4000r/min at room temperature for 5min, transfer 3ml supernatant in to centrifuge tube, blow to dry by nitrogen or air at 56℃.

2) Add suitable quantity of sample diluent according to detection limit requirement as following Table, blo w and beat repeatedly to redisslove (Note the blow and beating of tube well), absorb 60ul solution to test.

Detection limit (ppb)	5	10	20	30	40	50
Sample diluent (ml)	0.3	0.6	1.2	1.8	2.4	3

7.2 Feed

A. Regular feed

1) Weigh crushed feed 3g±0.05g into 50ml centrifuge tube, add 8ml Ethyl acetate, shake vigorously by hand or Vortex for 5min, centrifuge at 4000r/min at room temperature for 5min, transfer 3ml supernatant into centrifuge tube, blow to dry by nitrogen or air at 56℃.

2) Add suitable quantity of n-hexane firstly, blow and beat repeatedly to redisslove (Note the blow and beating of tube well), then add sample diluent, shake for 20s, be static for 3min, (centrifuge at 4000r/min at room temperature for 5min if there is Emulsifying phenomenon at down-layer.) And according to detection limit requirement as following Table, absorb 60ul down-layer liquid to test.

Detection limit (ppb)	5	10	20	30	40	50
Sample dilulent (ml)	0.3	0.6	1.2	1.8	2.4	3
n-hexane (ml)	0.9	1.8	3.6	5.4	7.2	9

B. DDGS

1) Weigh crushed feed 3g±0.05g into 50ml centrifuge tube, add 8ml $CHCl_3$, shake vigorously by hand or Vortex for 5min, centrifuge at 4000r/min at room temperature for 5min, transfer 3ml supernatant into centrifuge tube, blow to dry by nitrogen or air at 56℃.

2) Add suitable quantity of n-hexane firstly, blow and beat repeatedly to redisslove (Note the blow and beating of tube well), then add sample diluent, shake for 20s, be static for 3min, (centrifuge at 4000r/min at room temperature for 5min if there is Emulsifying phenomenon at down-

layer.) And according to detection limit requirement as following Table, absorb 60ul down-layer liquid to test.

Detection limit (ppb)	5	10	20
Sample dilulent (ml)	0.3	0.6	1.2
n-hexane (ml)	0.9	1.8	3.6

7.3 Edible oil

1) Weigh 4.0g oil sample into 50ml centrifuge tube, add 3ml pure water and 16ml n-hexane, shake for 3min, absorb out up-layer n-hexane phase, add 4ml Ethyl acetate, cup and shake for 3min, be static or centrifuge at 4000r/min at room temperature for 5min, absorb 3ml supernatant into centrifuge tube, blow to dry by nitrogen or air at 56 ℃.

2) Add suitable quantity of n-hexane firstly, blow and beat repeatedly to redisslove (Note the blow and beating of tube well), then add sample diluent, shake for 20s, be static for 3min, (centrifuge at 4000r/min at room temperature for 5min if there is Emulsifying phenomenon at down-layer.) And according to detection limit requirement as following Table, absorb 60ul down-layer liquid to test.

Detection limit (ppb)	5	10	20
Sample dilulent (ml)	0.8	1.6	3.2
n-hexane (ml)	2.4	4.8	9.6

7.4 Peanuts

1) Weigh crushed peanut 3g±0.05g into 50ml centrifuge tube, add 5ml Acetonitrile, shake vigorously for 3 min, centrifuge at 4000r/min at room temperature for 5min, transfer 2ml supernatant into centrifuge tube, blow to dry by nitrogen or air at 56℃.

2) Add suitable quantity of n-hexane firstly, blow and beat repeatedly to redisslove (Note the blow and beating of tube well), then add sample diluent, shake for 20s, be static for 3min, (centrifuge at 4000r/min at room temperature for 5min if there is Emulsifying phenomenon at down-layer.) And according to detection limit requirement as following Table, absorb 60ul down-layer liquid to test.

Detection limit (ppb)	5	10	20	30
Sample dilulent (ml)	0.5	1	2	3
n-hexane (ml)	1.5	3	6	9

8. Operation procedures

8.1 Take out the test card from Aluminum foil bag, use it in 1 hour.

8.2 Put the test card flatly, use dropper to drop **1~2 drops** of sample vertically(or use micropipette to take 60 ul) in the Sample collect region vertically.

8.3 Wait for 3~5 min to read the result. (It's valid in 10 minutes)

9. Test Result Interpretation

9.1 Negative: Red T line appears. It means there is no aflatoxin B1 residue in sample or the residue is lower than detection limit.

9.2 Positive: Red T line is invisible. It means the residue is higher than detection limit.

9.3 Invalidation: C line isn't seen wine red. It means the test card is out of efficacy, out of date or improper operation. Please run the test again using another package. If the invalid tests keep happening, please contact the local distributor.
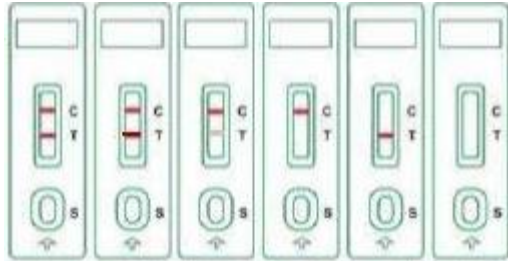
Negative Negative Negative Positive Invalid Invalid

10. Specificity

This product has no cross-
reaction with chloramphenicol, streptomycin, tetracycline, sulfonamides, quinolones and other types of drugs.

11. Precautions

1) The test card can be used only once at room temperature, do not use test card out of expiry date.

2) Every test card and dropper is single use only, to avoid cross pollution.

3) Do not touch the white membrane surface in the middle of test card, avoid sunlight and fan blowing directly.

4) Tap water, distilled water or deionized water can not be taken as negative control sample.

5) Use this card to test again when getting positive result.

6) Because of sample difference, sometimes the T line color may be lighter or gray, but only red line appears, it can be judged as Negative.

12. Storage and expiry date

Storage: Store at 4-30 ℃ in dark, sealed, dry place, <u>no frozen</u>.

Expiry date: 12 months; date of production is on box.