Elabscience®

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SEM(Nitrofurazone Metabolite) Rapid Test Kit

Catalog No: E-FS-C004

96T

This manual must be read attentively and completely before using this product.

If you have any problems, please contact our Technical Service Center for help.

Phone: 240-252-7368(USA)240-252-7376(USA)
Email: techsupport@elabscience.com
Website: www.elabscience.com

Please kindly provide us the lot number(on the outside of the box) of the kit for more efficient service.

Test principle and application

This kit uses the principle of competitive-inhibition-GICA. It can detect SEM (Nitrofurazone Metabolite)in samples, such as honey, tissue, liver, etc.After adding the sample solution into the sample well of detect card, SEM of the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with SEM conjugate on the cellulose membrane. When the concentration of SEM in the sample solution is more than the detection limit, the detect line do not show color reaction (or shows lighter color than control line) and the result is positive. When the concentration of SEM in the sample solution is less than the detection limit, the detect line shows purple (shows equal or darker color than control line) and the result is negative.

Technical indicator

Sensitivity: 1ppb (ng/mL)

Note: The final detection limit of sample equal to the result of sensitivity multiply by dilution ratio of sample pretreatment.

Detection limit: Honey/tissue/ casing/liver---0.5ppb.

Kits components

Item	Specifications
Detect card	50T/kit
Sample reconstituted solution	1 vial
Derivatization reagent	3 vials
Manual	1 copy

Other supplies required

Instruments: Homogenizer, Nitrogen blow-dry deviceOscillators, Centrifuge, Graduated pipette, Balance(sensibility 0.01g)

High-precision transferpettor: Single channel(20-200μL, 100-1000μL)

Reagent: Ethyl acetate, N-hexane,NaOH, concentratedHCl,$K_2HPO_4 \cdot 3H_2O$

Sample pretreatment

1. **Sample pretreatment Notice:**Experimental apparatus should be clean, and the pipette should be disposable to avoid the experiment result be interfered by the contamination.
2. **Reagent preparation**

Solution 1: 0.5MK_2HPO_4

Dissolve 11.4g $K_2HPO_4 \cdot 3H_2O$ to 100mL with deionized water

Solution 2: 1 M HCl solution

Dilute 8.6mL concentrated HCl to 100mL with deionized water

Solution 3: 1 M NaOH solution

Dissolve 4g NaOH to 100mL with deionized water

3. Sample pretreatment procedure

Pretreatment ofhoney, tissue, casing, liver:

(1) Weigh2±0.05g of sample into EP tube, add 4mL of deionized water, 0.5mL of Solution 2 and 600μL of derivatizationreagent, oscillate for 5min.

(2) Incubate with water bath(65℃) for 30 min.

(3) Add 1mL of Solution 1, 0.4mL of Solution 3 and 5mL of ethyl acetate, oscillate for 5min.

(4) Centrifuge at 4000r/min at room temperature for 5 min.

(5) Take 2.5mL of upper liquid to another tube, blow-dry in nitrogen or air.

(6) Dissolve the residual with 1mL n-hexane, add 0.5mL of reconstituted solution and oscillate for 30s. Centrifuge at 4000r/min at room temperature for 5 min.

(7) Discard the upper n-hexane, takelower liquid to analyze.

Note: Sample dilution factor: 2, Detection limit: 0.5ppb

Experiment procedure

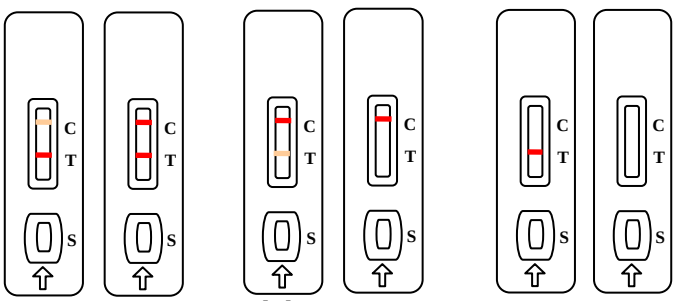
1. Tear the aluminum foil bag of the detect card and take out the detect card, and put it on a smooth, clean table.
2. Take the prepared clear sample supernatant with the matching straw, add 2-3 drops (about 60uL) of sample to the sample well (S) vertically and slowly.
3. Keep the detect card at room temperature for 8-10min, then judge the result.

Judgment of result

Negative: the control line region (C) shows red, the test line region (T) shows equal or darker than line C. It indicates the content of SEM in the sample is lower than detection limit or the sample doesn't contain SEM.

Positive: the control line region (C) shows red, the test line region (T) shows lighter color than line C or shows no color. It indicates the content of SEM in the sample is higher than detection limit.

Invalid: the control line region (C) shows no color. It indicates operation process is wrong or the test card is invalid.



Negative Positive Invalid

Notes

1. Do not use product out of date or in a broken aluminum foil.
2. The detect card should be adjusted to room temperature after removed from the refrigerator before opening. The opening detect card should be used as soon as possible so as not to be invalid because of moisture.
3. Avoid of contacting the whitemembrane at the middle of the sample well.
4. The droplets cannot be mixing to avoid the cross-contaminant.
5. The tested sample should be clear, no turbidity particle and no bacterial pollution, otherwise it is easy to result in abnormal phenomena such as obstruction, unobvious color, etc., which affect the judgment of the experiment result.

Storage and valid period

Storage: Store at 2-30℃ with dry condition.

Valid Period: 1 year, production date is on the packing box.