SAs (Sulfonamides) Lateral Flow Assay Kit

Catalog No: E-FS-C028

50T

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.

Toll-free: 1-888-852-8623 Tel: 1-832-243-6086 Fax: 1-832-243-6017
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

This kit uses the principle of Immunochromatography assay for the qualitative detection. It can detect SAs (Sulfonamides) in samples, such as honey, muscle, milk, etc. After adding the sample solution into the sample well of detection card, SAs in the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with SAs conjugate on the cellulose membrane. When the concentration of SAs in the sample solution is more than the detection limit, the detect line do not show color and the result is positive. When the concentration of SAs in the sample solution is less than the detection limit, the detect line show color and the result is negative.

Technical indicator

Sensitivity: 20 ppb (ng/mL)

Detection limit of sulfonamides:

Name	Sensitivity (ppb)
Sulfamethazine (SM2)	5
Sulfamonomethoxine (SMM)	0.8
Aristebon (SMD)	1
Sulfadimoxine (SDM')	1.5
Sulfamerazine (SM1)	2
Sulfadiazine (SD/SDZ)	4
Sulfadimetine (SM2')	2.5
Sulfadimethoxine (SDM)	3
Sulfamethythiadiazole (SMT)	3
Sulfaclozine (Esb3)	7.5
Sulfathiazole (ST)	9
Sulfachlorpyridazine (SCPA)	9
Sulfamethoxypyridazine (SMP)	9
Sulfadimethoxine (SDT)	35
Sulfaquinoxaline (SQX)	35
Sulfasoxazole (SIZ)	120
Sulfapirazinmetossina (SMZ)	120

Detection limit (based on SM2 concentration): Muscle---5 ppb; Honey---20 ppb; Milk---40 ppb

Kits components

Item	Specifications
Detection card (with disposable dropper)	50 T/kit
Reconstitution Buffer	1 vial
Manual	1 copy

Note: All reagent bottle caps must be tightened to prevent evaporation and microbial pollution.

Other materials required but not supplied

Instruments: Homogenizer, Nitrogen Evaporators, Water bath, Centrifuge, Graduated pipette, Balance (sensibility 0.01g), Oscillators

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

Reagent: Ethyl acetate, N-hexane, NaOH, Concentrated HCl

Notes

1. FOR RESEARCH USE ONLY. Do not use product out of date or in a broken aluminum foil.
2. Bring detection card to room temperature before opening the aluminum foil. The opening detection card should be used as soon as possible so as not to be invalid because of moisture.
3. Avoid of contacting the white membrane at the middle of the sample well.
4. The disposable dropper 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 and unobvious color which affect the judgment of the experiment result.
6. If the samples are not indicated in the manual, a preliminary experiment to determine the validity of the kit is necessary.
7. The kit is used for rapid screening of actual samples. If the test result is positive, the instrument method such as HPLC, LC/MS, etc. can be used for quantitative confirmation.
8. Each reagent is optimized for use in the E-FS-C028. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-FS-C028 with different lot numbers.

Storage and expiry date

Storage: Store at 2-30℃. With cool and dry environment.

Expiry date: expiration date is on the packing box.

Sample pretreatment

Restore all reagents and samples to room temperature before use.

1. **Sample pretreatment Notice:**

   Experimental apparatus should be clean, and the disposable dropper should be disposable to avoid the experiment result be interfered by the contamination.

2. **Sample pretreatment**

   Solution 1: 0.5 M HCl Solution

   Dilute 4.3 mL **Concentrated HCl** to 100 mL with deionized water

   Solution 2: 0.2 M NaOH Solution

   Dilute 0.8g **NaOH** to 100 mL with deionized water

3. **Sample pretreatment procedure:**

   Restore all reagents and samples to room temperature before use.

3.1 Pretreatment of muscle (livestock, fish, shrimp) sample:

(1) Remove the skin and fat of sample, homogenize with homogenizer (exclude honey sample). Weigh 4±0.05 g of homogenized sample into a 50 mL centrifuge tube. Add 2 mL deionized water, oscillate strongly into a smooth paste, add 4 mL **Ethyl acetate** and oscillate for 5 min. Centrifuge at 4000 r/min for 5 min at room temperature.

(2) Take 2 mL of clear upper organic phase to a clean tube, dry in nitrogen evaporators or water bath at 50-60℃.

(3) Add 0.5 mL **Reconstitution Buffer** to dissolve the residual, take the lower liquid to analyze.

Note: Detection limit: 5 ppb (SM2)

If the fat content is high after drying, please add 1-2 mL N-hexane, oscillate and mix fully. Then add 0.5 mL Reconstituted Solution, mix fully and stand for 5 min. Liquid will have clear stratification, take the lower liquid to analyze.

3.2 Pretreatment of honey sample:

(1) Weigh 1±0.05 g of honey sample into a 15mL centrifuge tube. Add 1 mL **0.5 M HCl Solution** (Solution 1) stand for 30 min at 37℃.

(2) Add 2.5mL **0.2M NaOH (**Solution 2) (adjust the pH to 5), add 4mL **Ethyl acetate** again, oscillate for 5 min. Centrifuge at 4000 r/min for 10 min at room temperature;

(3) Take 2mL of clear upper organic phase to a clean tube, dry in nitrogen evaporators/water bath at 50-60℃.

(4) Add 0.5mL sample **Reconstitution Buffer** to dissolve the residual, take the liquid to analyze.

Note: Detection limit: 20 ppb (SM2)

3.2 Pretreatment of milk sample:

Dilute the fresh milk sample with deionized water (V/V=1:1), mix fully for analysis.

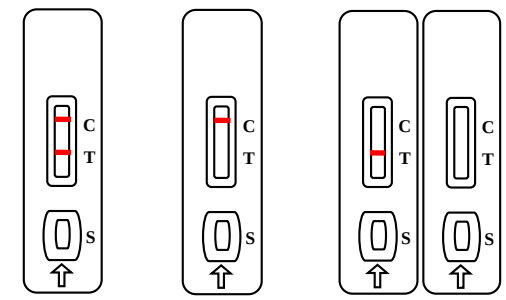
Note: Detection limit: 40 ppb (SM2)

Experiment procedure

1. Tear the aluminum foil bag of the detection card and take out the detection card, and put it on a smooth, clean table.
2. Take the prepared sample with the matching disposable dropper, add 2-3 drops (about 60 μL) of sample to the sample well (S) vertically and slowly (Avoid foaming).
3. Incubate for 8 to 10 minutes and then judge the results immediately.

Judgment of result

1. **Negative:** The control line region (C) and the test line region (T) both show a line. It indicates the content of SAs in the sample is lower than detection limit or the sample doesn't contain SAs.
2. **Positive:** Only the control line region (C) show a line. It indicates the content of SAs in the sample is higher than detection limit.
3. **Invalid:** The control line region (C) does not show a line. It indicates operation process is wrong or the test card is invalid.



Negative Positive Invalid