SM_2 (Sulfamethazine) Lateral Flow Assay Kit

Catalog No: E-FS-C116

20T/40T/80T

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 SM_2 (Sulfamethazine) in samples, such as muscle, liver, etc. After adding the sample solution into the sample well of detection card, SM_2 of the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with SM_2 conjugate on the cellulose membrane. When the concentration of SM_2 in the sample solution is more than the detection limit, the detect line do not show color reaction and the result is positive. When the concentration of SM_2 in the sample solution is less than the detection limit, the detect line shows color and the result is negative.

Technical indicator

Detection limit of sample: Muscle ---5 ppb; Honey ---20ppb; Milk---40ppb; Egg---5ppb.

Kits components

Item	Specifications
Detection Card (with disposable dropper)	40 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, Centrifuge, Oscillators, Nitrogen evaporators, Graduated pipette, Balance (sensibility 0.01).

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

Reagents: Ethyl Acetate, N-hexane, Acetonitrile, NaOH, HCl

Notes

1. FOR RESEARCH USE ONLY. Do not use product out of date or in a broken aluminum foil.
2. The detection card should be adjusted to room temperature after removed from the refrigerator before opening. 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, unobvious color, etc., which affect the judgment of the experiment result.
6. **Each reagent is optimized for use in the E-FS-C116. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-FS-C116 with different lot number**
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.

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. **Reagent preparation:**

   Solution 1: 0.5 M HCl Solution

   Add 4.3 mL of Concentrated HCl to 100 mL with deionized water, mix fully.

   Solution 2: 0.2 M NaOH Solution

   Dissolve 0.8 g of NaOH to 100 mL with deionized water, mix fully.

   Solution 3: Acetonitrile Solution

   Acetonitrile: deionized water =84:16 (V/V), mix fully.

3. Sample pretreatment procedure:

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

(1) Remove the skin and fat of fish, shrimp, crab and livestock, homogenize with homogenizer.

(2) Weigh 4±0.05 g of homogenate sample into 50 mL centrifuge tube, add 2 mL of deionized water, mix fully. And add 4 mL of **Ethyl Acetate,** oscillate for 5 min. Centrifuge at 4000 r/min at room temperature for 5 min.

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

(4) Dissolve the residual with 0.5 mL of **Reconstitution Buffer**, take the lower liquid for analysis.
*If the fat content is high after drying, please add 1 mL **Dissolver**, 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 analysis.*
Note: Detection limit: 5 ppb

3.2 Pretreatment of honey sample:

(1) Weigh 1±0.05 g of homogenate sample into 15 mL centrifuge tube, add 1 mL of **0.5 M HCl Solution (Solution 1)**, mix fully. And add 2.5 mL of **0.2 M NaOH Solution (Solution 2)**, adjust the PH value to about 5. And add 4 mL of **Ethyl Acetate**, oscillate for 5 min. Centrifuge at 4000 r/min at room temperature for 5 min.

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

(3) Dissolve the residual with 0.5 mL of **Reconstitution Buffer**, take the lower liquid for analysis.
*If the fat content is high after drying, please add 1 mL **Dissolver**, 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 analysis.*
Note: Detection limit: 20 ppb

3.3 Pretreatment of milk sample:

(1) Take 600 μL of fresh milk sample and 600 μL of deionized water into 2 mL centrifuge tube, mix fully.

(2) Take 100 μL for analysis.
Note: Detection limit: 40 ppb

3.4 Pretreatment of egg sample:

(1) Weigh 3±0.05 g of homogenate sample into 50 mL centrifuge tube, add 9 mL of **Acetonitrile Solution (Solution 3)**, oscillate for 5 min. Centrifuge at 4000 r/min at 15℃ for 10 min (If a refrigerated centrifuge is not available, chill sample to approx 15 ℃ prior to centrifugation).

(2) Take 3 mL of supernatant, 3 mL of deionized water, and 4.5 mL of **Ethyl Acetate** to another clean tube, oscillate for 5 min. Centrifuge at 4000 r/min at 15℃ for 10 min (If a refrigerated centrifuge is not available, chill sample to approx 15 ℃ prior to centrifugation).

(3) Take all of supernatant.to another 15 mL clean tube, dry with nitrogen evaporators/water bath at 50-60℃ (Please do it in a ventilated environment).

(4) Dissolve the residual with1-2 mL of **N-hexane**, add 0.3 mL of **Reconstitution Buffer** to 15 mL tube, and mix fully. Let stand for about 5min.

(5) Take the lower liquid for analysis.

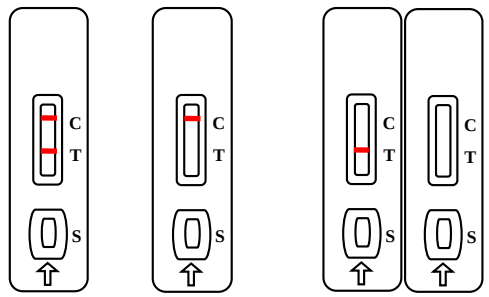
Note: Detection limit: 5 ppb

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 clear 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.
2. **Positive:** Only the control line region (C) show a line.
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