MG (Malachite Green) Lateral Flow Assay Kit

Catalog No: E-FS-C050

20T/80T

Version Number:	V1.2
Replace version:	V1.1
Revision Date:	2024.03.14

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 MG (Malachite Green), in samples, such as muscle (fish, shrimp), water sample, etc. After adding the sample solution into the gold-labelled micro well of detection card, MG of the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with MG conjugate on the cellulose membrane. When the concentration of MG in the sample solution is more than the detection limit, the detect line do not show color (or shows lighter color than control line) and the result is positive. When the concentration of MG in the sample solution is less than the detection limit, the detect line shows color (shows equal or darker color than control line) and the result is negative.

Technical indicator

Detection limit: Muscle, Water ---1 ppb

Kits components

Item	Specification
Detection Card (contains gold-labelled micro well and disposable dropper)	20 T/kit
Extractant 1	2 vials
Reagent 1	2 vials
Oxidizing Agent	2 vials
Reconstitution Buffer	2 vials
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, Oscillators, Centrifuge, Graduated pipette, Balance (sensibility 0.01 g).

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

Reagent: Acetonitrile, N- hexane.

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 Do not use product out of date or in a broken aluminum foil.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-C050. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-FS-C050 with different lot numbers.**
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. Sample pretreatment procedure:

2.1 Pretreatment of water sample:

Mix 60 μL of water sample with 60 μL of **Reconstitution Buffer** for test.

Note: Detection limit: 1 ppb

2.2 Pretreatment of low-fat muscle (fish, shrimp) sample:

(1) Remove the skin, bone and fat of fish, shrimp, homogenize with a homogenizer

(2) Weigh 4±0.05 g of homogenate muscle into 15 mL centrifuge tube.

(3) Add 2 mL of **Reagent 1,** oscillate vigorously for 2 min in centrifuge tube. Add 150 μL of **Extractant 1** and 4 mL of **Acetonitrile**, 2 mL of **N- hexane**. Screw the top of the tube, oscillate vigorously for 2 min to make the mixture (the sample becomes a dilute paste) reacting fully.

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

(5) Remove 2 mL of liquid at middle layer (supernatant is not allowed to be sucked) to a 5 mL centrifuge tube, add 100 μL of **Oxidizing Agent**, oscillate for 30 s and dry in nitrogen evaporators or water bath at 65℃(Please do it in a ventilated environment.).

(6) Add 300 μL of **Reconstitution Buffer** into the centrifuge tube to make the dry residual dissolve fully.

(7) Take 120 μL of the liquid for analysis.

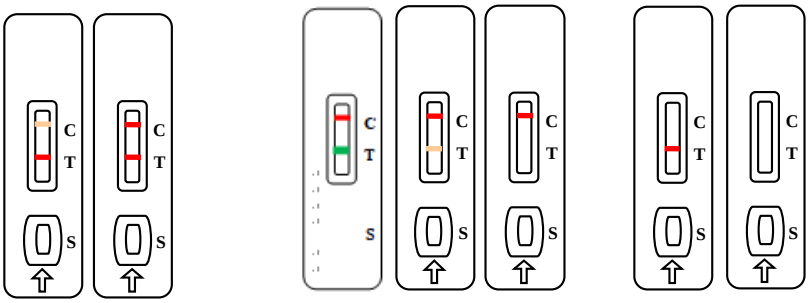
Note: Detection limit: 1 ppb

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 sample with the matching disposable dropper, add 120 μL (5-6 drops) of sample to the gold-labelled micro well, wait for 2 min, whip the purple residual with a disposable dropper until it is completely dissolved (Avoid foaming), wait for 2 min again, remove all the liquid of the gold-labelled micro well into the sample well, count down at the same time.
3. Incubate for 5 to 8 minutes and then judge the results immediately.

Judgment of result

1. **Negative:** The control line region (C) show color, the test line region (T) shows equal or darker than line C. It indicates the content of MG in the sample is lower than detection limit or the sample doesn't contain MG.
2. **Positive:** The control line region (C) show color, the test line region (T) shows no color or lighter color than line C (Remark: if the line (T) shows green 5 min later, it means also positive). It indicates the content of MG in the sample is higher than detection limit.
3. **Invalid:** The control line region (C) shows no color. It indicates operation process is wrong or the test card is invalid.



Negative Positive Invalid