MG (Malachite Green) Rapid Test Kit
Catalog No: E-FS-C007
10T

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)   Fax: 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**

This kit uses the principle of Colloidal Gold Immunochromatography assay. It can detect MG (Malachite Green), in samples, such as tissue (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 reaction (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 purple (shows equal or darker color than control line) and the result is negative.

**Technical indicator**

**Sensitivity:** 4 ppb (ng/mL)

**Detection limit:** Malachite Green ---1 ppb

Leucomalachite green (oxidized) ---1 ppb

**Kits components**

<table>
<thead>
<tr>
<th>Item</th>
<th>10 T/KIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection card</td>
<td>10 T/kit</td>
</tr>
<tr>
<td>(with pipette and contains gold-labelled micro well)</td>
<td></td>
</tr>
<tr>
<td>Extractant 1</td>
<td>1 vial</td>
</tr>
<tr>
<td>Extractant 2</td>
<td>10 vials</td>
</tr>
<tr>
<td>Oxygenant</td>
<td>1 vial</td>
</tr>
<tr>
<td>Reconstitution Buffer</td>
<td>1 vial</td>
</tr>
<tr>
<td>Manual</td>
<td>1 copy</td>
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</tbody>
</table>

**Other supplies required**

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

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

**Reagent:** Acetonitrile.

**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. Sample pretreatment procedure:

2.1 Pretreatment of water

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

Note: Detection limit: 1 ppb

2.2 Pretreatment of tissue (fish, shrimp):

(1) Homogenized muscle without fat, bone and skin.
(2) Weigh 3 ± 0.1 g of homogenized muscle into 15 mL EP tube
(3) Add 4 mL Extractant 1 and 4 mL Acetonitrile, Screw the top of the tube, oscillate vigorously for 3 min to make the mixture (the sample becomes a dilute paste) reacting fully.
(4) Add a vial of Extractant 2, screw the top of the tube, oscillate vigorously for 3 min, and centrifuge at 4000 r/min for 5 min at room temperature.
(5) Remove 1.2 mL of clear upper liquid (liquid at the middle is not allowed to be sucked) to a glass tube, add 100 μL of Oxygenant, oscillate well and dry in nitrogen evaporators/water bath at 65°C (It is considered as a normal phenomenon if liquid residues at the bottom less than 100 μL, add Reconstitution Buffer directly, the result is guaranteed).
(6) Add 300 μL Reconstitution Buffer into the glass tube to dissolve the dry residual. Oscillate well 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 clear sample supernatant with the matching pipette, add 120 μL of sample to the gold-labelled micro well, wait for 2 min, whip the purple residual with a burette 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.

**Notes**

1. 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 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.
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.

**Storage and valid period**

**Storage:** Store at 2-30°C for 1 year. With cool and dry environment.

**Expiry date:** expiration date is on the packing box.