

Heavy Metal Lead Lateral Flow Assay Kit

Catalog No: E-FS-C219

20T/40T/80T

Version Number: V1.0
Replace version: /
Revision Date: 2026.05.07

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.

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Email: techsupport@elabscience.com

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

Test principle

This product is used for the rapid detection of heavy metal lead in vegetables or fruits, featuring simple operation and short detection time.

Technical indicator

Detection limit:

Sample Type	Detection limit (mg/kg)
Fresh vegetables (excluding brassicas, legumes, ginger, tubers and leafy vegetables), fresh fruits (excluding cranberries and gooseberries)	0.1
Brassicas, legumes, ginger, tubers	0.2
Leafy vegetables	0.3
Pickled vegetables	0.5
Dried vegetables	0.8

Kits components

Item	Specifications
Detection Card	20 T/kit
Reagent A	2 vials
Reagent B	2 vials
Reagent C	2 vials
Reagent D	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, Centrifuge, Graduated pipette, Balance (sensitivity 0.01 g), Oscillators, EP tubes.

Micropipette: Single channel (20-200 µL, 100-1000 µL)

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 Do not use product out of date or in a broken aluminum foil.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. This test card is for single use only, do not reuse.
3. Avoid of contacting the whitemembrane at the middle of the sample well. Avoid direct sunlight and direct fan blowing during testing. Knives used for sample preparation must be cleaned before use to prevent cross-contamination.
4. The disposable dropper cannot be mixing to avoid the cross-contaminant.
5. Do not use water or other liquids as a negative control for detection.
6. 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. Use the sample within 30 min after preparation, if the time is too long, reprocess the sample before testing. Too much or too little sample volume will affect the color development. Please strictly follow the instructions.
7. **Each reagent is optimized for use in the E-FS-C219. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-FS-C219 with different lot numbers.**
8. The reagents involved in this product are safe and reliable, and do not contain carcinogenic, highly toxic, flammable, explosive, or highly corrosive reagents.
9. 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°C. 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:

Note: Only edible fractions of test samples shall be collected and chopped; ginger, root and tuber vegetables are to be peeled prior to processing.

2.1 Pretreatment of fresh vegetables (excluding brassicas, legumes, ginger, tubers and leafy vegetables), fresh fruits (excluding cranberries and gooseberries) sample:

- (1) Weigh 1 ± 0.05 g of sample into 15 mL centrifuge tube, add 2 mL of **Reagent A** and 0.2 mL of **Reagent B**, seal the bottle tightly with the stopper, oscillate vigorously for 3 min in centrifuge tube. Let stand for 1 min to obtain the sample solution.
- (2) Take 100 μ L of the clarified liquid into a 1.5 mL centrifuge tube, then add 300 μ L of **Reagent C** and mix well.
- (3) The mixed solution is the test solution to be detected.

Note: Detection limit: 0.1 mg/kg (ppm)

2.2 Pretreatment of brassicas, legumes, ginger, tubers sample:

- (1) Weigh 1 ± 0.05 g of sample into 15 mL centrifuge tube, add 2 mL of **Reagent A** and 0.2 mL of **Reagent B**, seal the bottle tightly with the stopper, oscillate vigorously for 3 min in centrifuge tube. Let stand for 1 min to obtain the sample solution.
- (2) Take 100 μ L of the clarified liquid into a 1.5 mL centrifuge tube, then add 300 μ L of **Reagent C** and mix well. Let stand for 3 min to obtain the sample solution, add 400 μ L of **Reagent D** and mix well.
- (3) The mixed solution is the test solution to be detected.

Note: Detection limit: 0.2 mg/kg (ppm)

2.3 Pretreatment of leafy vegetables sample:

- (1) Weigh 1 ± 0.05 g of sample into 15 mL centrifuge tube, add 2 mL of **Reagent A** and 0.2 mL of **Reagent B**, seal the bottle tightly with the stopper, oscillate vigorously for 3 min in centrifuge tube. Let stand for 1 min to obtain the sample solution.
- (2) Take 100 μ L of the clarified liquid into a 1.5 mL centrifuge tube, then add 300 μ L of **Reagent C** and mix well. Let stand for 3 min to obtain the sample solution, add 800 μ L of **Reagent D** and mix well.
- (3) The mixed solution is the test solution to be detected.

Note: Detection limit: 0.3 mg/kg (ppm)

2.4 Pretreatment of pickled vegetables sample:

- (1) Weigh 0.5 ± 0.05 g of sample into 15 mL centrifuge tube, add 3 mL of **Reagent A** and 0.2 mL of **Reagent B**, seal the bottle tightly with the stopper, oscillate vigorously for 3 min in centrifuge tube. Let stand for 1 min to obtain the sample solution.
- (2) Take 100 μ L of the clarified liquid into a 1.5 mL centrifuge tube, then add 300 μ L of **Reagent C** and mix well. Let stand for 3 min to obtain the sample solution, add 400 μ L of **Reagent D** and mix well.
- (3) The mixed solution is the test solution to be detected.

Note: Detection limit: 0.5 mg/kg (ppm)

2.5 Pretreatment of dried vegetables sample:

- (1) Weigh 0.5 ± 0.05 g of sample into 15 mL centrifuge tube, add 3 mL of **Reagent A** and 0.2 mL of **Reagent B**, seal the bottle tightly with the stopper, oscillate vigorously for 3 min in centrifuge tube. Let stand for 1 min to obtain the sample solution.
- (2) Take 100 μ L of the clarified liquid into a 1.5 mL centrifuge tube, then add 300 μ L of **Reagent C** and mix well. Let stand for 3 min to obtain the sample solution, add 400 μ L of **Reagent D** and mix well.
- (3) The mixed solution is the test solution to be detected.

Note: Detection limit: 0.8 mg/kg (ppm)

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 mixed solution, add 100 μ L of the test solution 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) show color, the test line region (T) shows equal or darker than line C. It indicates the content of heavy metal lead in the sample is lower than detection limit or the sample doesn't contain heavy metal lead.
2. **Positive:** The control line region (C) show color, the test line region (T) shows no color or lighter color than line C. It indicates the content of heavy metal lead 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.

