# β-lactams(Beta-lactam Antibiotic) Lateral Flow Assay Kit

Catalog No: E-FS-C105

40T

| | |
|---|---|
| **Version Number:** | V1.2 |
| **Replace version:** | V1.1 |
| **Revision Date:** | 2026.05.29 |

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
Website: www.elabscience.com

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

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## Test principle

This kit uses the principle of Immunochromatography assay for the qualitative detection. It can detect β-lactams (β-lactams) in milk samples. After adding the sample solution into the sample well of detection card, β-lactams in the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with β-lactams conjugate on the cellulose membrane. When the concentration of β-lactams 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 β-lactams in the sample solution is less than the detection limit, the detect line shows color (shows equal or darker than the control line) and the result is negative.

## Technical indicator

**Detection limit (based on Penicillin G concentration):** Fresh milk ---2 ppb

**Detection limit of β-lactams:**

| Name | Detection limit (ppb) |
|---|---|
| Penicillin G | 2 |
| Cloxacillin | 6 |
| Cephalonium | 20 |
| Cefoperazone | 50 |
| Ampicillin | 6 |
| Dicloxacillin | 30 |
| Ceftriaxone | 50 |
| Ceftiofur | 60 |
| Amoxicillin | 4 |
| Cefotaxime Sodium | 20 |
| Nafcillin | 30 |

## Kits components

| Item | Specifications |
|---|---|
| Detection card (contains gold-labelled micro well) | 40 T/kit |
| Manual | 1 copy |

## Other supplies required

**Instruments:** Homogenizer, Centrifuge, Graduated pipette, Balance (sensibility 0.01g), Water bath.

**High-precision transferpettor:** 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 Do not use product out of date or in a broken aluminum foil.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.
3. Avoid of contacting the white membrane at the middle of the sample well.
4. The pipette 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.
8. Each reagent is optimized for use in the E-FS-C105. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-FS-C105 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 pipette should be disposable to avoid the experiment result be interfered by the contamination.

**2. Sample pretreatment**

*The sample must be fresh and free of contamination and no deterioration.*

2.1 The temperature of the experimental environment must be more than 20℃. The frozen milk is obviously granules, which is easy to cause the liquid to fail to reach the C-line position. At this time, it is must be heated sample with water bath (20℃)

2.2 Take the appropriate amount of fresh milk with a dry and clean centrifuge tube or another container. The milk sample can be stored at 2~8℃ for 24 hours to avoid invalid or contamination if not assay immediately.

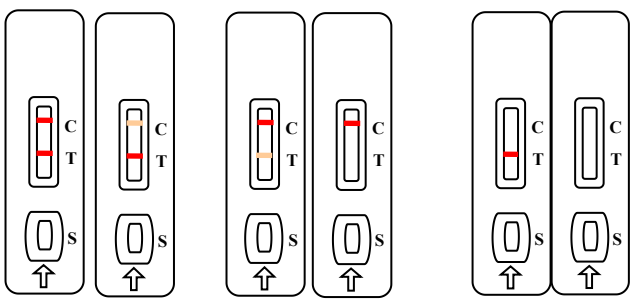
**Note: Detection limit: 2 ppb**

## 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 with pipette, add 8 drops (about 200 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 (S), count down at the same time.
3. Incubate for 10 minutes and then judge the results immediately. Test results are invalid after 30 minutes.

## 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 β-lactams in the sample is lower than detection limit or the sample doesn't contain β-lactams.
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 β-lactams in the sample is higher than detection limit.
3. **Invalid:** The control line region (C) show no color. It indicates operation process is wrong or the test card is invalid.




Negative Positive Invalid

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