

MilkGuard

β-Lactams & Streptomycin & Chloramphenicol & Tetracyclines Quadruple Test Kit

1. Principle

This kit is based on the specific reaction of antibody-antigen and immunochromatography. β-lactams, streptomycin, chloramphenicol, tetracyclines antibiotics in the sample compete for the antibody with the antigen coated on the membrane of the test strip. Then after a color reaction, the result can be observed.

2. Applications

This kit is used for rapid qualitative analysis of β-lactams, streptomycin, chloramphenicol, tetracyclines in raw milk sample.

3. Detection Limit (LOD)

β-lactams	MRL(μg/L)	LOD(μg/L)	Cephalosporins	MRL(μg/L)	LOD(μg/L)
penicillin G	4	2-3	cefalonium	20	3-4
ampicillin	4	3-4	cefepime	-	3-4
amoxicillin	4	3-4	cefoperazone	50	4-5
oxacillin	30	5-6	cefquinome	20	10-12
cloxacillin	30	4-5	Cephapiirin	60	15-20
dicloxacillin	30	4-5	Cephacetrile	125	35-40
nafcillin	30	14-16	Cefazolin	60	50
			ceftriaxone	-	55-60
			ceftiofur	100	60-80
			Cefalexin	100	>1000
Tetracyclines	MRL(μg/L)	LOD(μg/L)	Aminoglycoside	MRL(μg/L)	LOD(μg/L)
tetracycline	100	4-6	streptomycin	125	15-20
oxytetracycline	100	6-8	Dihydrostreptomycin Sulphate	200	15-20
doxycycline	100	18-20	Chloramphenicol	MRL(μg/L)	LOD(μg/L)
chlortetracycline	100	4-6	chloramphenicol	0	0.2-0.3

4. Kit components

- 8-well strip and 8 test strip in one bottle. 12 bottles / kit.
- microwell holder
- Kit insert
- Plastic pipette, 96pcs

** Use one strip for one sample, the rest strips can be stored in the bottle for future use.

5. Instrument needed but not provided

Metal incubator(suggested product: Kwinbon Mini-T4)

Test Dipstick Reader(suggested product: Kwinbon K-reader)

6. Assay operations

- (1) Read the instructions carefully before experiment. Bring the test kit and samples to room temperature. Milk samples should be fully liquid without any agglomeration or deposition.
- (2) Take bottles needed from the kit package, take out required wells and strips, and make proper marks. Please use these test strips within 1h. Seal the cap of the bottles. The rest strips can be stored for future use.
- (3) Preheat the metal incubator to **45℃**.
- (4) Place the microwells in the metal incubator, Take **200ul** of the test samples into the wells, then repeatedly absorb and drop for 5 times to mix the sample with the reagent in the wells completely. The mixture should be pink, and then start the timer.
- (5) Incubate for **3min** in the metal incubator (45℃); insert the test strips into the wells with the "**Sample pad**" end fully dipped in to the mixture.
- (6) Incubate for **6min** in the metal incubator(45℃) again. Take out the strip; judge the result according to **Part 7**.

7. Results

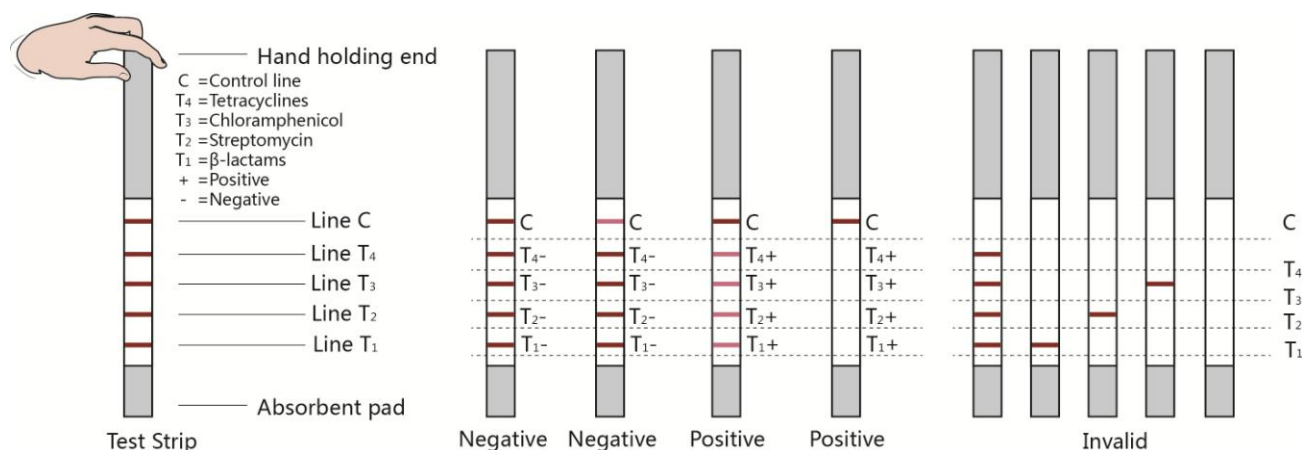
There are 5 lines in the strip, **Control line**, **Tetracyclines Line**, **Chloramphenicol Line**, **Streptomycin Line** and **Beta-lactams Line**, which are briefly used as "**C**", "**T₄**", "**T₃**", "**T₂**" and "**T₁**". The test results will depend on the color of these lines. The following diagram describes the result identification.

7.1 Method 1(manual interpretation)

Negative(-) : **Line T** and **Line C** are both red, color of Line T is stronger than or similar to Line C, indicating the corresponding residue in sample is less than LOD of the kit.

Positive(+) : **Line C** is red, color of **Line T** is weaker than **Line C**, indicating the corresponding residue in sample is higher than LOD of the kit.

Invalid: **Line C** has no color, which indicates the strips are invalid. In this case, please read the instructions again, and redo the assay with new strip.



Note: *If the result of the strip needs to be recorded, please cut the "**Absorbent pad**" end, and dry the strip, then keep it as file.*

7.2 Method 2(Instrument interpretation)

Read the test dipstick with the dipstick reader.

8. Specificity

The product shows negative at the level of 500μg/L of melamine, lincomycin, erythromycin, Sulfamethazine etc.

9. Storage

2-8℃ in cool dark place, do not freeze. The kit will be valid in 12 months. The lot number and expired date are printed on the package.

10. Notice for operations

- (1) Please do the assay following the instruction, do not touch the membrane of the strip.
- (2) Please seal the bottle after taking out required strips.
- (3) This strip is used for only once; please do not use it repeatedly.
- (4) This kit is only for screening test, positive result should be further confirmed with other method.