

E. coli Count Plate User Manual

1. Principle

The FSTest *E. coli* count plate is a single-use, ready-to-use culture medium. It is designed based on the principle that β -glucuronidase in *E. coli* reacts with the enzyme substrate in the plate, resulting in the formation of blue-green colonies.

2. Application

Intended to detect *Escherichia coli* in various raw and cooked foods and their products. Examples include:

Dairy and dairy products: Pasteurized milk, sterilized milk, cheese, etc.

Fruits and vegetables: Bananas, fresh vegetables such as broccoli and bok choy, fresh coconut juice, dried fruits, dried vegetables, pickled vegetables, etc.

Fresh meat and meat products: Fresh pork, lamb, beef, chicken, braised pork, braised beef, salt-baked shredded chicken, etc.

Fresh seafood and seafood products: Fresh shrimp, fresh crucian carp, frozen shrimp meat, frozen squid meat, etc.

3. Limit of detection

1-10CFU/mL(g)

4. Kit composition

Count Plate $\times$ 24

User manual.

The reagents and appliances may be required but not provided: sterile water, sterile saline or phosphate buffer solution, 1-1000uL pipette and tips, incubator, sterile sampling can or homogenization bag, homogenizer, refrigerator, scale, vortexer, sterile glass test-tube, test-tube rack, etc.

5. Specifications

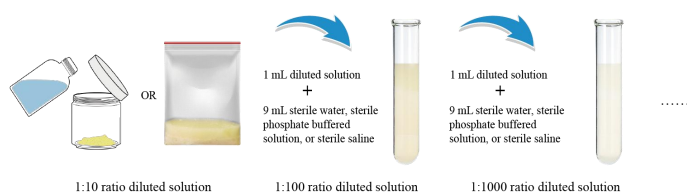
24 tests

6. Sample treatment

6.1 Prepare the 1:10 ratio homogenized sample solution by adding 25g or 25mL of sample into a sampling can or homogenization bag containing with 225mL of sterile water, sterile phosphate buffered solution, or sterile saline.

Note: If the sample to be tested is solid, such as pork or chicken, it should be appropriately cut into small pieces before homogenization; if the sample to be tested is liquid, such as pasteurized milk or sterilized milk, it only needs to be mixed well with the diluent.

6.2 Mix 1mL sample solution and with 9mL sterilized distilled water, sterile phosphate buffered solution, or sterile saline to reach the final ration 1:100. A serial of dilutions can be obtained by following the same steps. Make sure to change a pipette each time.



7. Procedure & steps

7.1. Inoculation

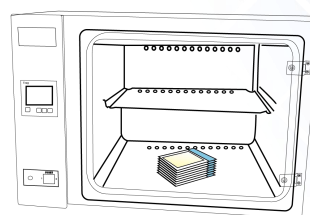
The appropriate dilution for test can be selected according to the actual needs. Select 2-3 appropriate dilution ratio to do the following test. Open the package, place the FSTest *E.coli* count

plates onto a sterile laboratory bench, clean bench, or biosafety cabinet, uncover the film on the top. Add 1 mL of sample solution onto the duplicated count plates, then recover the film gently and set for at least 10s to allow the culture medium solidifies. Inoculate two count plates for each dilution ratio and one blank control needs to be included meanwhile.



7.2. Culture

Pile up the count plates (less than 12 pieces for each pile) and put them back into the original plastic bags and seal. Culture for 18-24 h at $36 \pm 1^\circ\text{C}$ with the film side upward.



8. Results determination

Blue-green colonies on the test plate indicate *Escherichia coli*, while colonies of other colors represent other bacteria. A test plate with a moderate number of colonies (10–100 CFU) should be selected for counting.

If only one dilution level has a colony count within the appropriate range (10–100 CFU), calculate the average colony count from the two test plates at that dilution, then multiply the average by the corresponding dilution factor to determine the *E. coli* count per milliliter (or gram) of the sample.

If all dilution levels have colony counts exceeding 100 CFU, count the colonies on the highest dilution test plate, record other plates as "too numerous to count," and calculate the result by multiplying the average colony count by the highest dilution factor.

If all dilution levels have colony counts below 10 CFU, use the lowest dilution's average colony count multiplied by its dilution factor for calculation.

If no colonies are observed at any dilution, report the result as "less than 1" multiplied by the lowest dilution factor.

If none of the dilution levels have an average colony count within the 10–100 CFU range, but some are below 10 CFU or above 100 CFU, use the average colony count closest to either 10 CFU or 100 CFU and multiply by the corresponding dilution factor for calculation.

9. Attention

9.1. The FSTest *E. coli* Count Plate is applicable for the detection of 94% of *E. coli* strains that contain β -glucuronidase. It can not test the *E. coli* which does not possess β -glucuronidase, such as *E. coli* O157:H7.

9.2. In high humidity environments, condensation may occur. It is recommended to equilibrate the plates to room temperature before opening the package.

10. Waste disposal

Beware of that the inoculated count plates may be contaminated by living *E. coli*, thus please dispose of the FSTest *E. coli* count plate after using according to the principle of biosafety waste in a timely manner.

11. Storage conditions

The count plate can be stored and transported at room temperature within 15 days, and then kept in the refrigerator at 4-10°C for 12 months. Once the package is opened, the unused count plate shall be put back into the aluminum foil bag with sealed at 4-10°C and used up within one month.



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