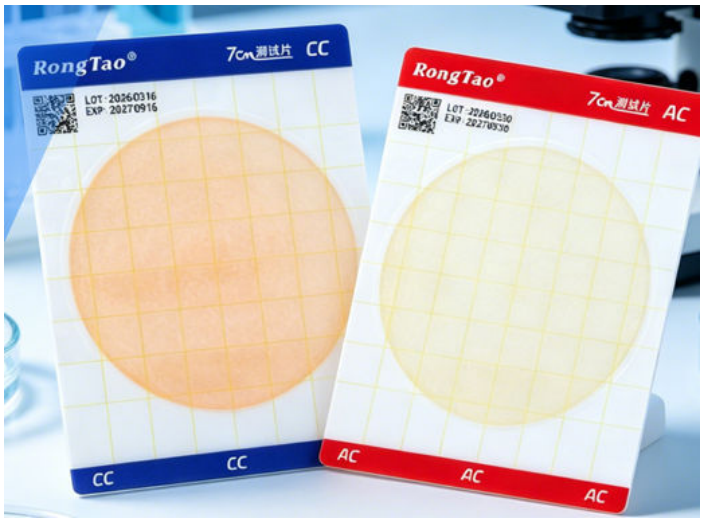
Coliform Count Plate (CC)

Catalog : RTCSP002

Coliform Count Plate(CC) is used for coliform enumeration in food, food ingredients, drinking water, and environmental samples.

Main Benefits:



1. Larger effective growth area:

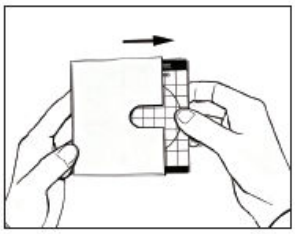
7cm diameter culture area, compared to the typical 5–5.5cm on the market. The larger area allows colonies to spread more widely, significantly improving counting accuracy and preventing misinterpretation caused by colony overlap.

2. Stable hard plastic base:

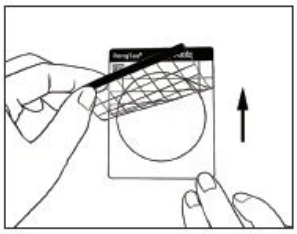
Single-piece molded plastic base (not paper) can resist deformation during handling and storage. No curling and interference. Stays flat throughout incubation, allows direct stacking, and does not affect microbial growth.

3. No spreader needed:

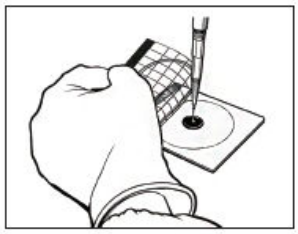
Just add the inoculum and cover with the top film. The bacterial solution will spread evenly within 30 seconds. No spreader required, fewer steps, fewer rules, even beginners can master it in 3 minutes.



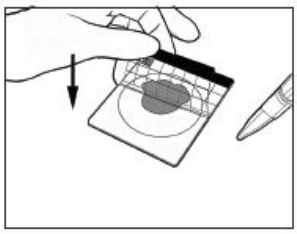
1. 取出测试片。



2. 测试片平放在水平实验台上，然后缓缓撕开上膜。

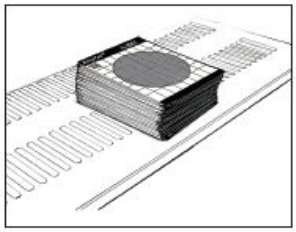


3. 将 1mL 样品匀液垂直滴加在测试片中心。



4. 缓慢盖上上膜，尽量避免气泡的产生。

5. 静置 30s 内，菌液即可自动扩散均匀。



6. 测试片正面朝上，放置于恒温培养箱中培养，测试片堆叠不应超 20 张。

扫描左侧二维码
即可观看操作视频

Directions:

1. Place Coliform Count Plate(CC) on level surface. Gently lift top film.
2. Add 1mL of sample or diluted sample vertically onto center of the culture area.
3. Gently drop the film down onto the sample and avoid creating bubbles.
4. Wait for within 30 seconds, the bacterial solution will spread evenly and cover all culture area.
5. Incubate plates in the incubator with film side up in stacks of up to 20pcs.
6. Count colonies using a marking pen or colony counter. For heavy growth, estimate via grid squares.

Qingdao Hope Bio-Technology Co ., Ltd ., China Tel:0532-66087711 E-mail:qdhbywg@vip.126.com http://www.hopebiol.com

Principle and Interpretation:

Coliform Count Plate (CC) is a completely ready-to-use culture medium product. Its components include peptone, yeast extract, lactose, sodium chloride, bile salts, neutral red, crystal violet, etc., To facilitate colony counting and interpretation, dual chromogenic agents are incorporated into the medium. The product features a 7 cm diameter culture plate, close to a 9 cm Petri dish, allowing easy colony observation and enumeration.

Procedures:

1. Sample Preparation

Weigh 25 g (mL) of sample into a sterile homogeneous bag containing 225 mL diluent (phosphate buffer or saline). Homogenize for 1–2 min to prepare a 1:10 sample suspension.

Note: If the sample is too acidic or alkaline, adjust the pH of the suspension to 6.8–7.2 using 1 mol/L NaOH or 1 mol/L HCl.

2. Sample Dilution

Using a 1 mL sterile pipette or micropipette, transfer 1 mL of the 1:10 suspension into a tube containing 9 mL diluent. Shake it with an oscillator to prepare a 1:100 dilution. Continue this process to prepare 10-fold serial dilutions. Use a new pipette or tip for each dilution step.

3. Inoculation

Based on the estimated microbial contamination level, select 2–3 appropriate dilutions (including the undiluted original liquid sample) for testing. Inoculate at least two plates per dilution. Allow plates to reach room temperature before use. Place a plate on level surface, gently lift top film, and vertically dispense 1 mL of the sample suspension onto the center of the culture area. Gently drop the film down onto the sample and avoid creating bubbles. The liquid will spread evenly on its own and cover all culture area.

4. Incubation

Place plates upright in an incubator, stacking up to 20 pcs. Incubate at 36°C ± 1°C (30°C ± 1°C for milk and dairy products) for 18–24 hours.

5. Colony Counting

Count blue-purple colonies with associated gas bubbles by visual inspection (using a colony counter if needed). The countable range is 15–150 CFU. Record the dilution factor and corresponding colony count. Note: If the entire culture area appears blue-purple and cannot be counted, the microbial concentration is too high – further dilution is required for accurate counting. To isolate colonies for further analysis, lift the top film and pick colonies using an inoculating needle.

6. Counting Tips

(1) If colonies are too numerous to count, select several representative grid squares, calculate the average colony count per square, and multiply by 38 to estimate the total count on the entire culture area.

(2) If the entire culture area has changed color, observe the next dilution. Count colonies from that dilution if they are within the optimal counting range. If no colonies are present, the sample or diluent may be problematic.

(3) Incubation temperatures of 36°C ± 1°C or 30°C ± 1°C do not apply to all sample types. For specific growth requirements, users are advised to compare results under multiple conditions.

Result Interpretation:

1. Colony appearance with gas bubbles produced by target organisms varies as follows:

(1) Typical colonies: one colony produces two or more bubbles. (①②③)

(2) One colony produces a single bubble, with the colony located at the center or edge of the bubble. (④⑤)

(3) The bubble ruptures the colony, splitting it into multiple parts along the edge of the bubble. (⑥⑦)

(4) Improper operation may produce bubbles in the plate, which are generally not associated with colonies. (⑧)

2. Bubbles produced by multiple colonies may coalesce. (⑨)

Precautions:

1. Avoid touching the culture area when handling the plates.
2. Do not expose the plates directly to halogen, UV, or fluorescent light.
3. Do not use contaminated plates.
4. Dispose used plates according to waste disposal regulations.

Storage conditions and Shelf life:

Storage Temp: 2-8℃.

Shelf life: 18 months.

Pack size: 20pcs/pack.

Note:

1. Store unopened packs of plates at 2-8°C. Use before expiration date on package.
2. Allow the plates to reach room temperature before use.
3. After opening, return unused plates to the pack, double-fold the end of the bag, and seal with tape or a sealing clip. Store at 2–8°C and use within one month.
4. Unopened packs of plates can be transported and stored short-term at room temperature.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1℃ for 18-24 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
Enterococcus faecalis	ATCC 29212	＞10^3	Inhibited	/	/
Escherichia coli	ATCC 25922	50-250	Luxuriant	≥70%	Blue-purple with gas
Citrobacter freundii	ATCC 43864	50-250	Luxuriant	≥70%	Blue-purple with gas
Enterobacter cloacae	ATCC 23355	50-250	Luxuriant	≥70%	Blue-purple with gas

References:

1. GB4789.28-2024 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.

Qingdao Hope Bio-Technology Co ., Ltd ., China Tel:0532-66087711 E-mail:qdhbywg@vip.126.com http://www.hopebiol.com