MICROFAST® Premium ENTEROBACTERIACEAE COUNT PLATE MF1311

Introduction

MicroFast® Enterobacteriaceae Count Plate (EB) is a sample-ready-culture medium system. It uses innovative technologies such as rapid diffusion systems and new-generation microbial coloration to achieve rapid proliferation and interpretation of colonies, greatly improving the detection efficiency in the laboratory.
The plate contains a prefabricated type of medium, cold-water gel, and indicator. It is intended for the enumeration of aerobic bacteria in food and environmental samples.
Certified to International Organization for Standardization (ISO) 9001 for design and manufacturing.

WARNINGS & PRECAUTIONS

- The user should read, understand, and follow all safety information in the instructions before use.
- The MicroFast Count Plate should be disposed of following procedures for infectious or potentially infectious products. Users should wear appropriate personal protective equipment, including, but not limited to, protective disposable gloves, laboratory coats, and eye protection when handling samples and kit reagents. Wash hands thoroughly after handling specimens and reagents. It is the responsibility of each laboratory to handle waste effluents produced according to their type and degree of hazardousness and to treat and dispose of them (or have them treated and disposed of) following local, state, and federal regulations. Strict compliance with BSL-2 practices should be followed.
- Follow all product storage guidelines included in the insert. Do not use it after the expiration date.
- MicroFast Count Plate testing should be done in a professionally equipped laboratory under the supervision of a skilled microbiologist. The user must train its staff on the current testing methods.
- MicroFast Count Plates have not been reported for application in industries other than food and environmental samples. Use within the suggested scope.
- Counting results of MicroFast Count Plates may not be the same as agar.
- MicroFast Count Plates have not been evaluated with all possible food products, food processes, testing protocols, or with all possible microorganism strains.
- As a general precaution, clean the workstations with the disinfectant of choice (e.g., sodium hypochlorite solution, phenol solution, quaternary ammonium solution) before and after, in addition to having work areas separated for the following: media preparation, sample preparation, and indicator organism enumeration. Gloves and other personal protectiveequipment should always be used.
- The count plate may contain microorganisms that may be a potential biohazard. Follow current industry standards for disposal.
- Keep the count plate away from ultraviolet, direct sunlight, and fluorescent lamp
- Do not use the polluted or damped count plate.
- If the pH of the test sample is too high or too low, it will affect the accuracy of the test results.
- When uncovering the film, do not touch the cultural area of the medium.
- If there are too many colonies, the detection of positive strains might be affected.
- If the sample is viscous, diffusion can be aided manually.
- When pipetting samples, do not touch the culture area.

Limitation of Warranties

Accurate results depend on the proper use of the kit by following the instructions for use carefully. If the kit fails to perform according to specification, please contact your sales representative at Scigiene.

Limitation of Scigiene Liability

Scigiene will not be liable for any loss or damages, whether direct, indirect, special, incidental, or consequential damages, including but not limited to lost profits, in no event shall Scigiene's liability under any legal theory exceed the purchase price of the product alleged to be defective.

User Responsibility

Users are responsible for becoming acquainted with product instructions and information. For further information, please contact your local Scigiene dealer or distributor.
When choosing a test method, please note that external factors such as sampling methods, testing protocols, sample preparation, handling, and laboratory technique can all have an impact on the results.
When selecting a test method or product, the user must assess a sufficient number of samples with the proper matrices and microbiological challenges to ensure that the chosen test method meets the user' criteria. The user also should ensure that any test methods and results fulfill the criteria of its customers/suppliers.
Results acquired from the use of any Scigiene product, like any other method, cannot guarantee the quality of the tested matrices or processes.

Sample Preparation

1. Use appropriate sterile diluents: i.e.

a. For raw and cured meat, vegetables, and seafood—50 g portions of the sample are added to 450 mL of Butterfield's phosphate buffer diluent.

b. For dairy products—take 11 mL of the sample and add 99 mL parts of Butterfield's phosphate buffer diluent.

c. For the environment sample surface, sponge-pre-moistened with 10 mL of BPBD can be used to sample each 100 cm2 test area by using firm and even pressure 10 times diagonally, vertically, and horizontally. After sampling, sponges were returned to the bags and held at room temperature (20 °C - 25 °C) for a minimum of two hours. A 90 mL volume of BPBD can be added. Or for direct contact methods with the environment or sample surface, hydrate the plate before use.
Note: do not use diluents containing citrate, bisulfite, or thiosulphate with MicroFast plates as they could inhibit growth.

2. Blend or homogenize the sample completely with 1 part sample and 9 parts diluents (1:10 dilution scheme).

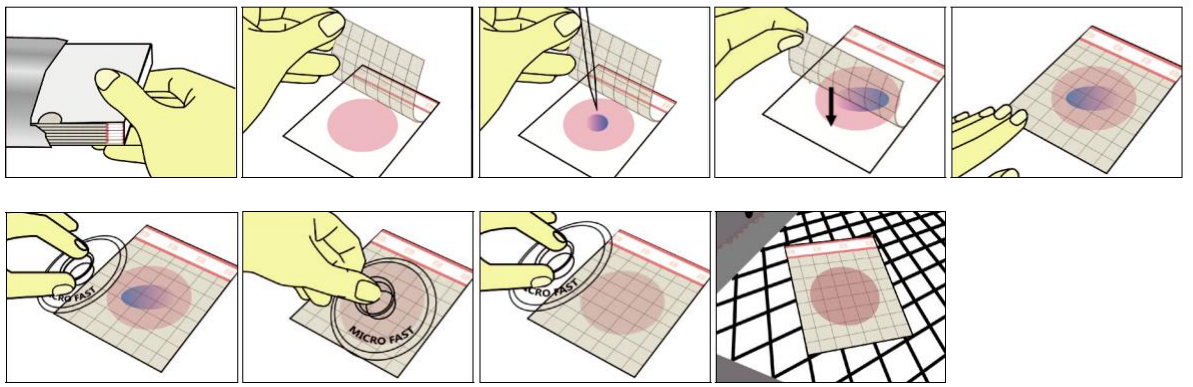
For optimal growth and recovery of microorganisms, the pH of the sample suspension should be adjusted to pH 6.5-7.5.
For acidic products, adjust the pH with 1N NaOH.

For alkaline products, adjust the pH with 1N HCl.

3. Prepare decimal dilutions of the homogenized sample solution by transferring ml of the homogenized solution to a tube containing 9 ml of sterile diluent and mix completely. Based on sample type, select 2 or 3 suitable diluted sample solutions that will result in the countable range for the MicroFast plate type being achieved.

Operation Procedure

1. Open the aluminum foil bag and place the MicroFast Plate on a flat, level surface.
2. Lift the top film whilst supporting the plate without touching the test area.
3. With the pipette vertical to the inoculation surface, dispense 1 mL of sample suspension (for the environment or sample surface, dispense 1mL of sterile diluent) onto the center of the bottom film.
4. Drop the top film down slowly and avoid generating bubbles.
5. After the top film is dropped down, avoid any movement of the top film.
6. Place the MicroFast Spreader on the center of the plate.
7. Press gently on the center of the MicroFast Spreader to distribute the sample evenly.
8. Remove the MicroFast Spreader and leave the plate undisturbed for at least two minutes to permit the gel to form.

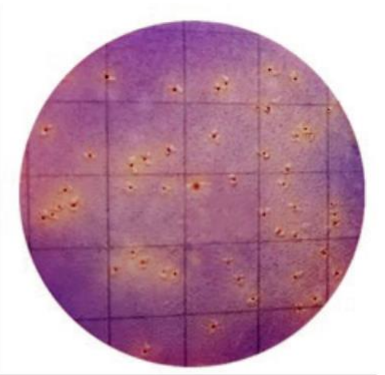


Incubation

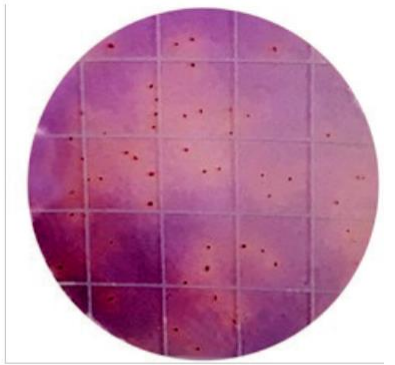
Incubate MicroFast plates in a horizontal position with the film upwards (top plate downwards) in stacks of no more than 20 pieces. Culture at 36±1°C for 18h-24h.

Interpretation

1. MicroFast plates can be counted visually using a standard colony counter or other illuminated magnifiers. Count all red and yellow colonies with yellow halos, with or without bubbles.
2. The approximate size of the circular growth area is 24 cm_2. Estimates can be made on MicroFast Plates containing between 15 - 150 colonies by counting the number of colonies in the circular growth area.
3. Alternatively, estimates can be made on MicroFast plates containing greater than 150 colonies by counting the number of colonies in two or more representative squares and determining the average number per square. Multiply the average number by 24 to determine the estimated count per plate.
4. High concentrations of colonies on the MicroFast plates will cause the entire growth area to appear discolored. Record this result as too numerous to count (TNTC).
5. Where a count is required, evaluate the performance of the next dilution. If there are obvious colonies in the next dilution and within the optimal counting range, they should be counted and recorded.
6. If there is no colony count, the count plate might have either been contaminated or the sample matrix has negatively influenced microbial growth on the count plate.



Gas-production positive colonies



Non-gas-production positive colonies

Gas Production Instructions

1. Colonies that produce bubbles (gas) may be interpreted as positive in the following examples:

a) Two colonies may be connected to one bubble;

b) A colony can be connected with one bubble or 2-3 bubbles or multiple bubbles;

c) Bubbles can be generated around the colonies and are not connected to the colonies;

d) Bubbles and colonies are in the same position, which may break the colonies and cause colonies to grow on the edges of the bubbles.

2. Bubbles caused by other reasons (not produced from colonies)

a) Bubbles will be generated due to improper operation. At this time, the bubbles are not connected with the colonies, and the bubbles are large, and the edges are irregular;

b) Foam-rich samples will cause bubbles in the count plate.

Explanation of colony acid production.

Too many colonies may cause the entire count plate to turn yellow.

Storage Condition

1. The shelf life of the count plate is 18 months. Use up within the shelf life. The lot number can be found on the pouch.
2. The count plate components are sterilized. Unopened count plates should be stored at 2°C -8°C. Equilibrate the count plate to room temperature before use.
3. After unsealing, stick the pouch with adhesive tape or seal it with a sealing clip, store it in the dark at room or ambient temperature of 15 °C -25 °C, and use it up within one month.
4. When transporting or short-term storage, store the count plate at room temperature (18 °C -30 °C).

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