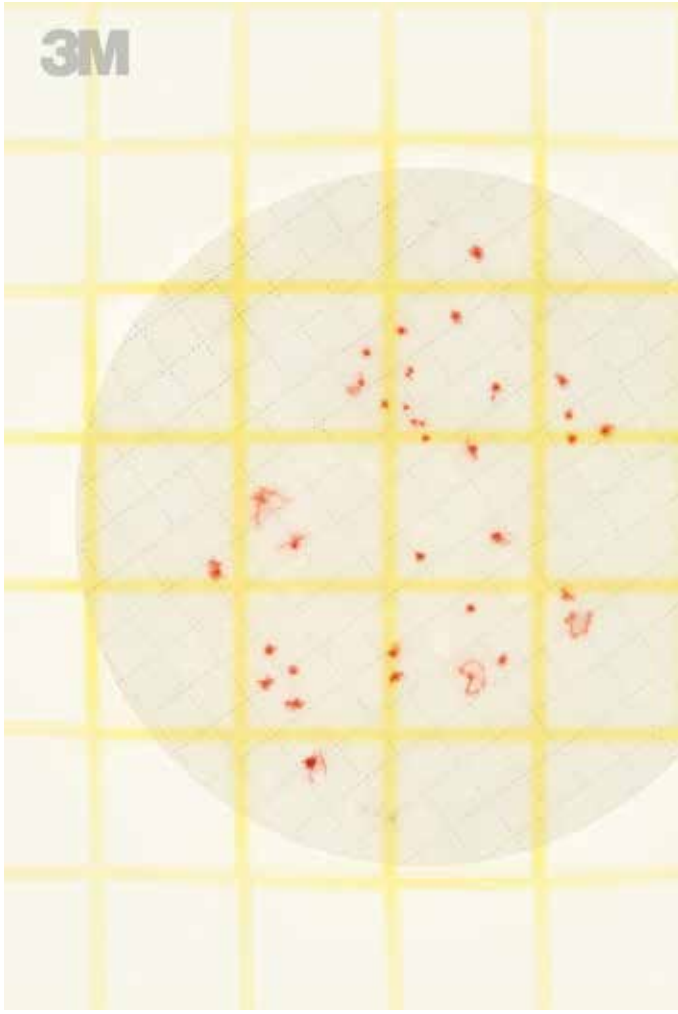
3M

Petrifilm™

Interpretation Guide

The 3M™ Petrifilm™ Aqua Heterotrophic Count Plate is a sample-ready culture medium system, which contains Standard Methods nutrients, a cold-water-soluble gelling agent, and a tetrazolium indicator that facilitates colony enumeration in the bottled water industry.



AQHC

Aqua Heterotrophic Count Plate

AQUA

Negative Plate and Plates with Colonies on Filter

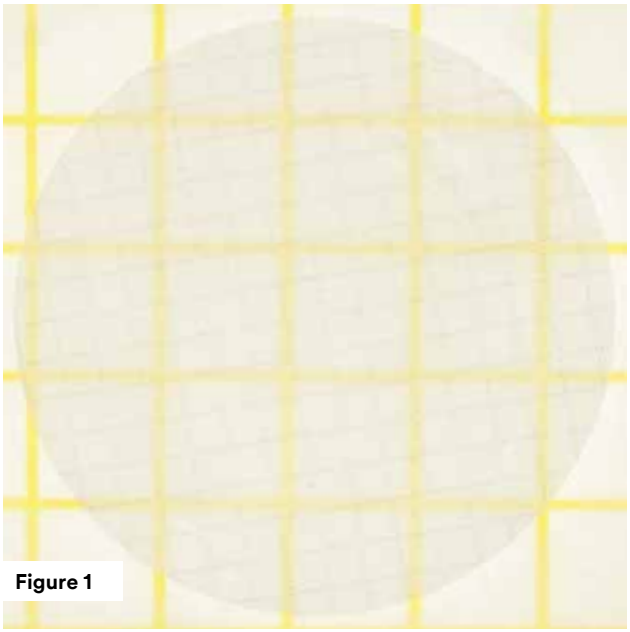


Figure 1

Heterotrophic count: 0

3M™ Petrifilm™ Aqua Heterotrophic Count Plate with no colonies on the filter.

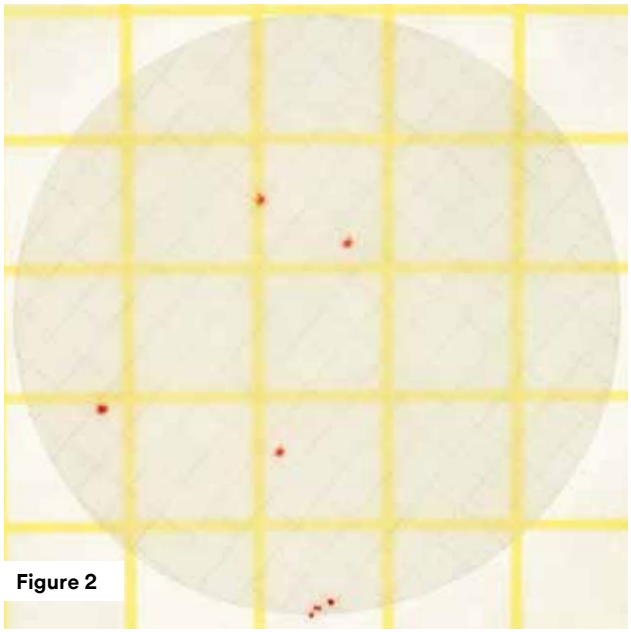


Figure 2

Heterotrophic count: 8

Count all colonies regardless of their size or color intensity.

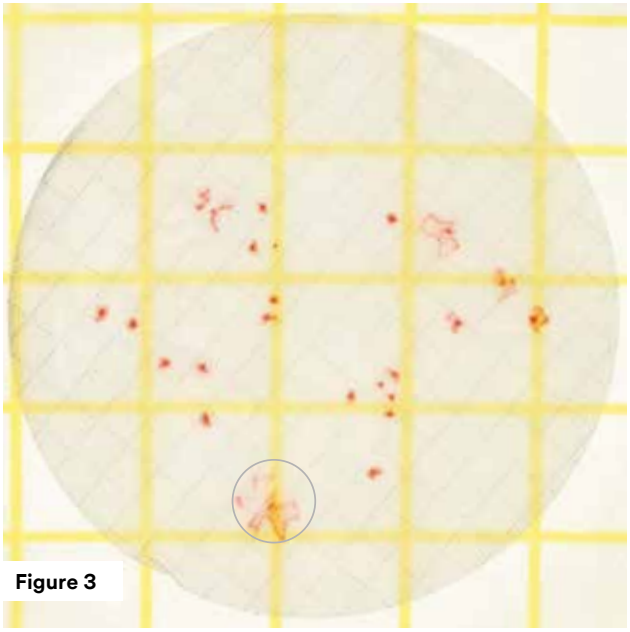


Figure 3

Heterotrophic count: 24

Note colony morphology is altered by colony-associated gas production. See circle for example.

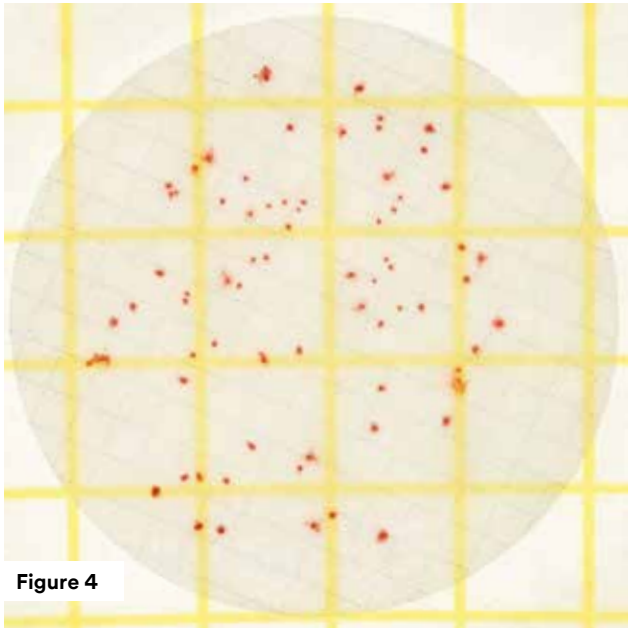


Figure 4

Heterotrophic count: 71

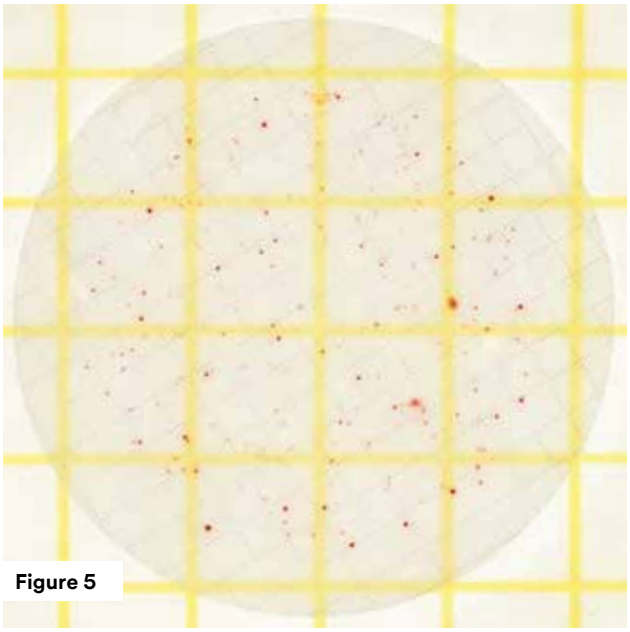


Figure 5

Heterotrophic count: too numerous to count (TNTC)

Note that colonies vary in size and color intensity.

For a more accurate count, further dilution may be necessary.

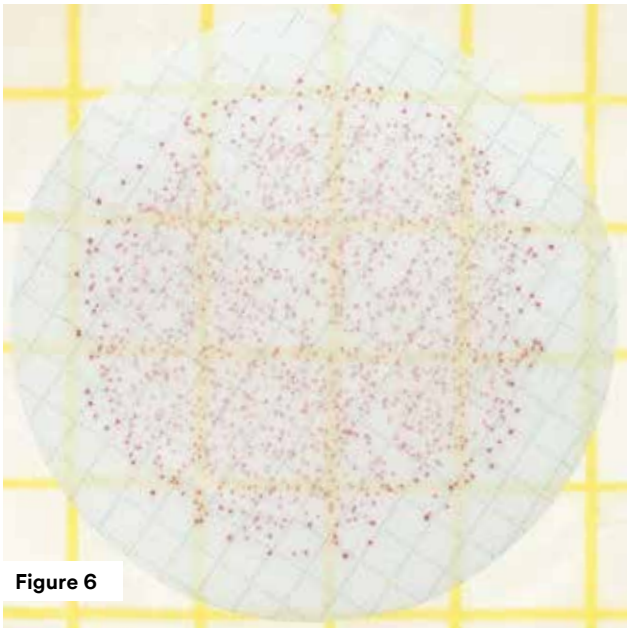


Figure 6

Heterotrophic count: TNTC

For a more accurate count, further dilution may be necessary.

Negative Plate and Plates with Colonies — 1 mL Direct Plate (No Filter)

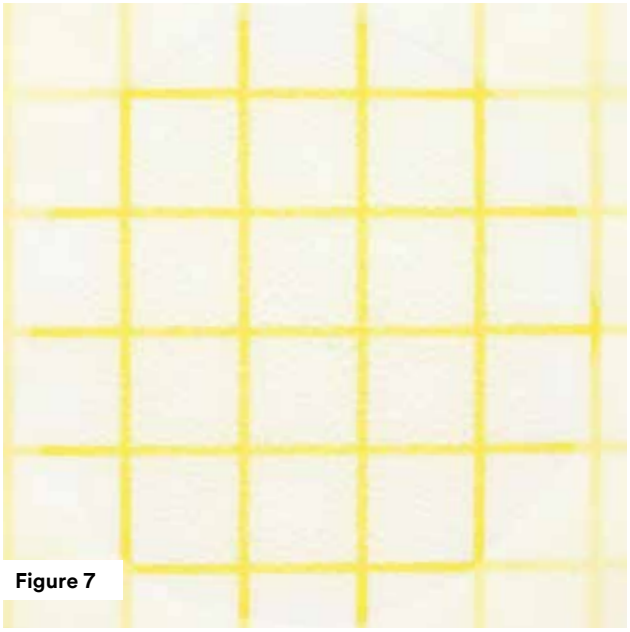


Figure 7

Heterotrophic count: 0

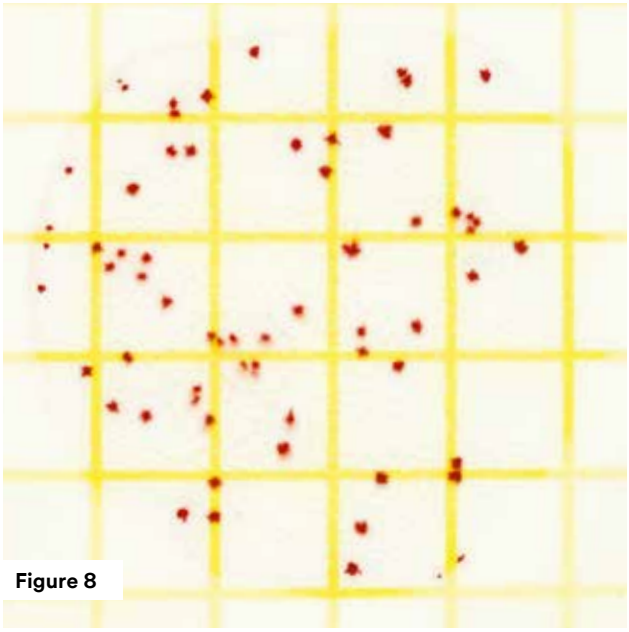


Figure 8

Heterotrophic count: 64

Count all colonies regardless of their size or color intensity.

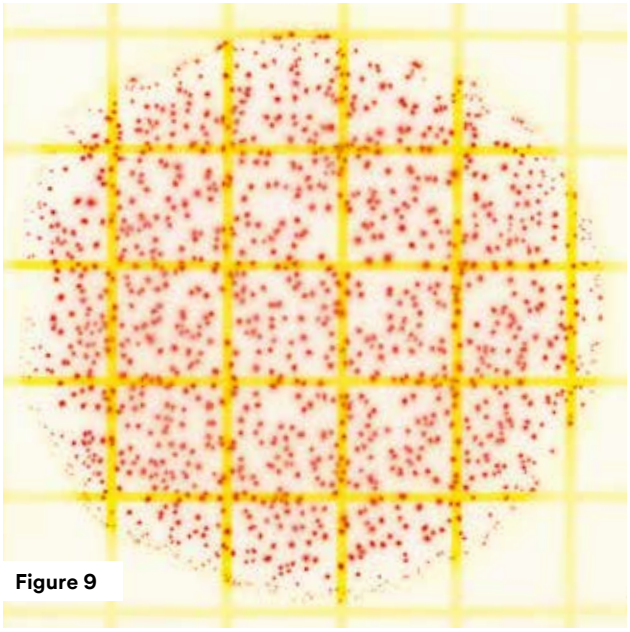


Figure 9

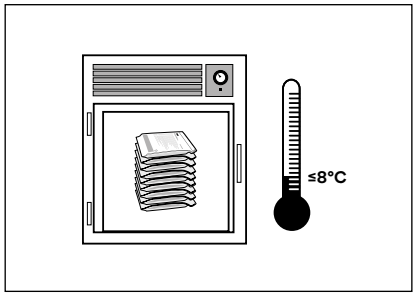
Heterotrophic count: TNTC

Estimates can be made on 3M Petrifilm Aqua Heterotrophic Count Plates with more than 300 colonies. Determine the average number of colonies in two or more squares (1 cm^2) and multiply by 20 to estimate the total count per plate.

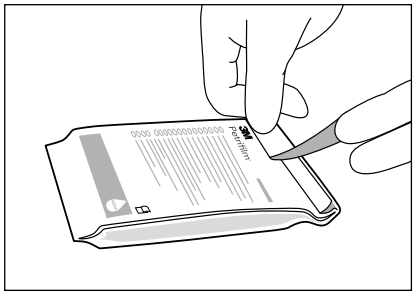
For a more accurate count, further dilution may be necessary.

Reminders for Use

Storage

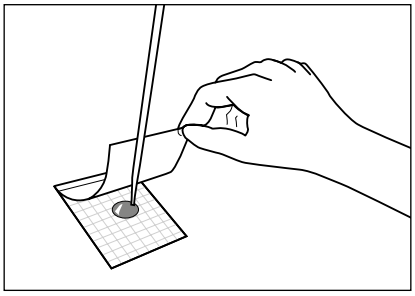


1. Store unopened packages at ≤8°C (≤46°F). Use before expiration date on package. Just prior to use, allow unopened pouches to come to room temperature before opening.

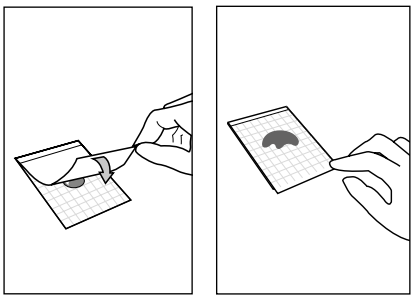


2. To seal opened package, fold end over and apply adhesive tape. **Do not refrigerate opened packages.** Use 3M Petrifilm Aqua Heterotrophic Count Plates within one month after opening.

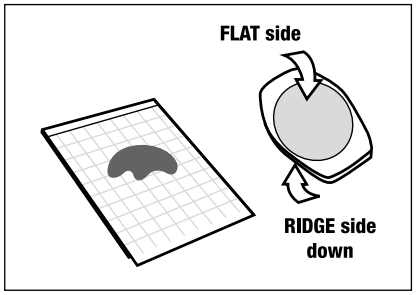
Inoculation or Hydration Procedure



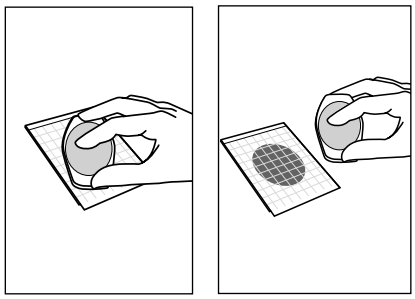
3. Place 3M Petrifilm Aqua Heterotrophic Count Plate on a level surface. With the pipette perpendicular to the 3M Petrifilm Aqua Heterotrophic Count Plate, place 1 mL of sample OR hydration diluent onto the center of the bottom film. Appropriate sterile hydration diluents include distilled water, deionized (DI) water, and reverse osmosis (RO) water.



4. Drop the top film onto the inoculum or hydration diluent.



5. With ridge side down, place 3M™ Petrifilm™ Spreader on top film over inoculum or hydration diluent.

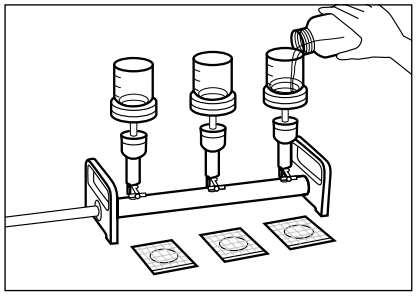


6. Gently apply pressure on spreader to distribute inoculum or hydration diluent over circular area before gel is formed. Do not twist or slide spreader. Lift spreader.

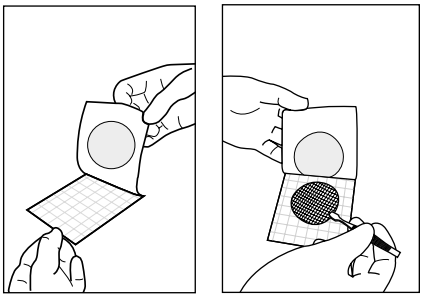
   When direct plating a sample, wait a minimum of one minute for gel to solidify. Proceed to step 10.

   - When inoculating with hydration diluent, allow the hydrated plates to remain closed for a minimum of one hour before use. Proceed to step 7.
   - Any additional hydrated 3M Petrifilm Aqua Heterotrophic Count Plates may be stored in a sealed pouch or plastic bag. Protect plates from light and refrigerate at 2–8°C (36–46°F) for up to 14 days.

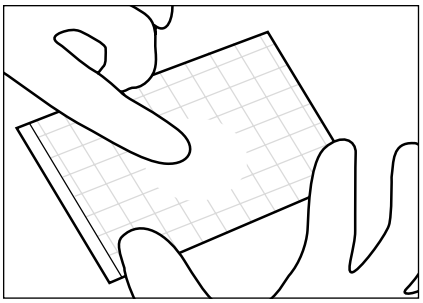
Inoculation Steps for Plates with Filters



7 Following standard procedures for water analysis, membrane filter water sample using a 47 mm, 0.45 micron pore size Mixed Cellulose Ester (MCE) filter.

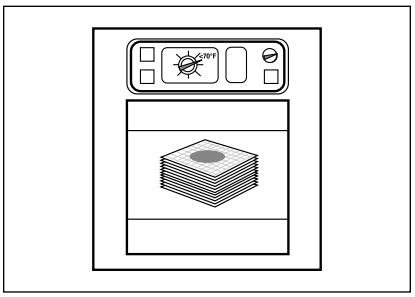


8 Lift the top film. Place filter in the center of the hydration area, grid side up. Roll top film down to minimize air bubbles or gaps between the filter and the 3M Petrifilm Aqua Heterotrophic Count Plate.



9 Lightly apply pressure to ensure uniform contact of the filter with the gel and to eliminate any air bubbles.

Incubation

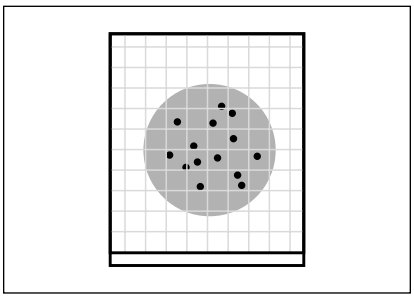


10 Incubate 3M Petrifilm Aqua Heterotrophic Count Plates in a horizontal position, clear side up, in stacks on no more than 20 plates:

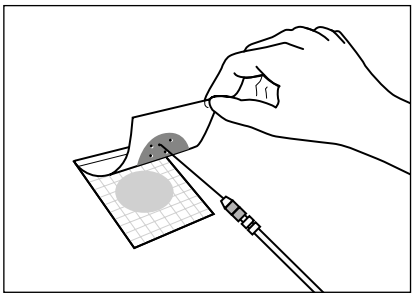
Plates with Filter Procedure: 35°± 2°C for 48 ± 3 hours

Direct Plate Procedure: 22°± 2°C for 68 ± 4 hours or 36°± 2°C for 44 ± 4 hours

Interpretation



11 3M Petrifilm Aqua Heterotrophic Count Plates can be counted on a standard colony counter or other illuminated magnifier.



12 Colonies may be isolated for further identification. Lift top film and pick the colony from the gel.

3M Food Safety offers a full line of products to accomplish a variety of your microbial testing needs. For more product information, visit us at **3M.com/foodsafety/Petrifilm** or call 1-800-328-6553.

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User's Responsibilities: 3M Petrifilm Plate performance has not been evaluated with all combinations of microbial flora, incubation conditions and food matrices. It is the user's responsibility to determine that any test methods are results meet the user's requirements. Should re-printing of this Interpretation Guide be necessary, user's print setting may impact picture and color quality.

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