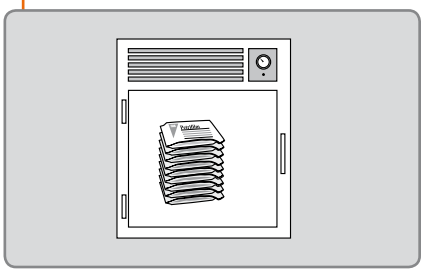
3M™ Petrifilm™ Aerobic Count Plates

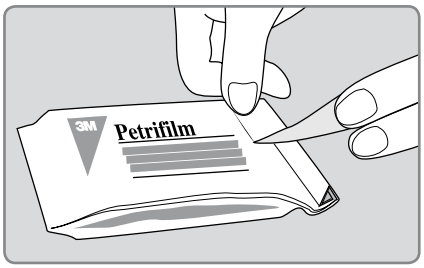
For detailed WARNINGS, CAUTIONS, DISCLAIMER OF WARRANTIES / LIMITED REMEDY, LIMITATION OF 3M LIABILITY, STORAGE AND DISPOSAL information, and INSTRUCTIONS FOR USE see product's package insert.

Reminders for use

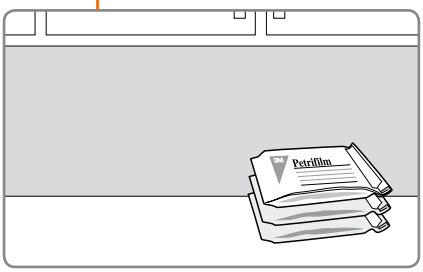
Storage



1 Refrigerate unopened packages of Petrifilm count plates. Use before expiration date on package.

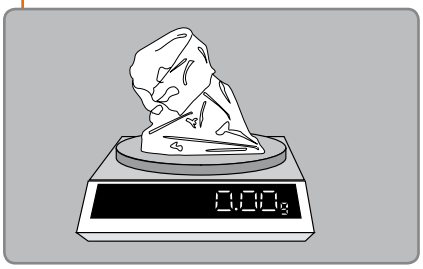


2 To seal opened package, fold end over and secure with tape or a clip.

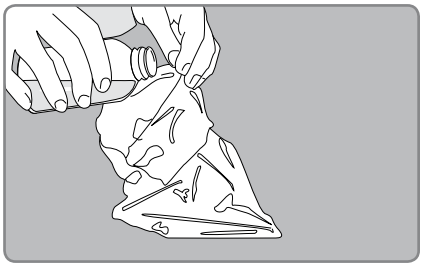


3 Keep resealed package at ≤21°C (≤70°F), ≤50%RH. **Do not refrigerate opened packages.** Use Petrifilm count plates within one month after opening.

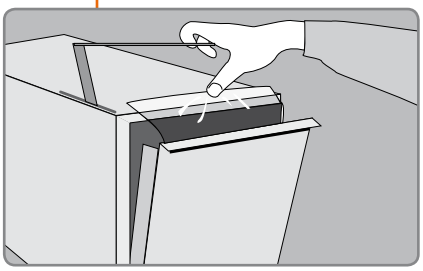
Sample Preparation



4 **Prepare** a 1:10 or greater dilution of food product. Weigh or pipette food product into a stomacher bag, dilution bottle, or other appropriate sterile container.

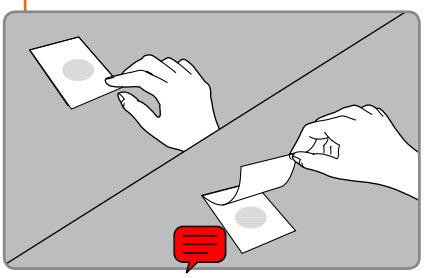


5 Add a[illegible]iate quantity of diluent. These include standard Methods phosphate buffer, 0.1% peptone water, distilled water, phosphate buffered saline, and Butterfield's buffer. **Do not** use buffers containing sodium citrate or thiosulfate.

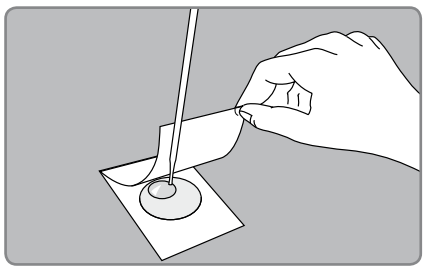


6 Blend or homogenise sample as per current procedure.

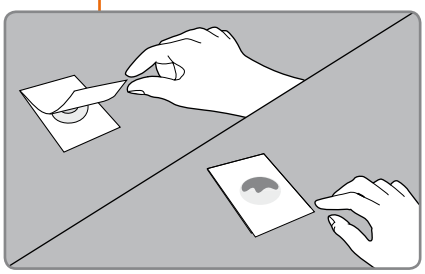
Inoculation



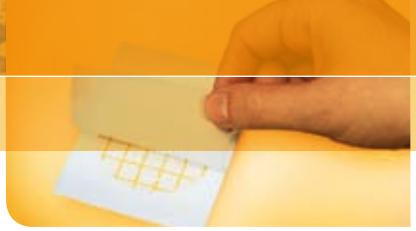
7 Place Petrifilm EL plate on **level** surface. Lift top film.



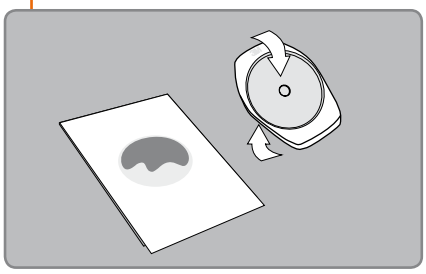
8 With pipette perpendicular to Petrifilm plate, place 1 mL of sample onto centre of bottom film.



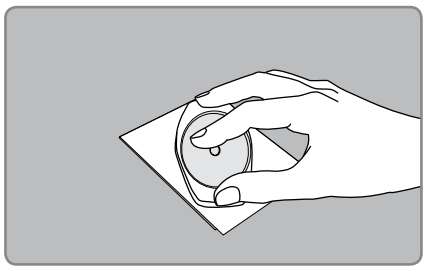
9 Release top film; allow it to **Drop.** **Do not** roll top film down.



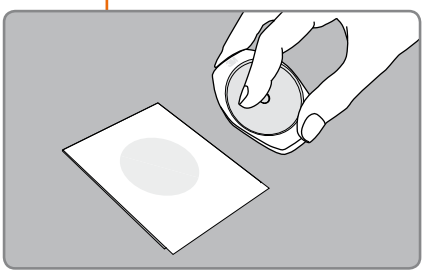
Inoculation



10 With ridge side down, place spreader on top film over inoculum.

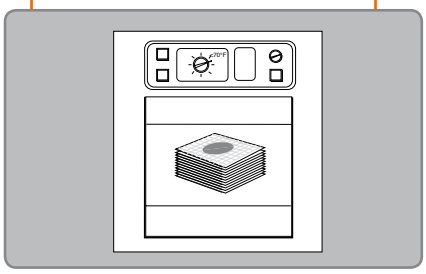


11 **Gently** apply pressure on spreader to distribute inoculum over circular area. Do not twist or slide the spreader.



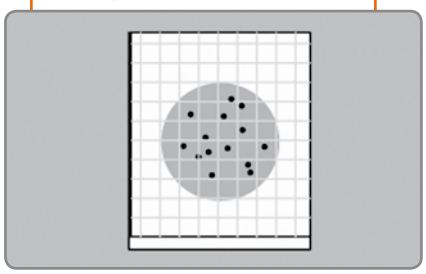
12 Lift spreader. Wait one minute for gel to solidify.

Incubation



13 Incubate Petrifilm count plates with the clear side up in stacks of 20 or less, at a temperature of 30°c +/- 1°c for 24 +/-2 hours (for all products, dairy and raw shellfishes excepted) or for 72 +/- 2 hours for all products.

Interpretation

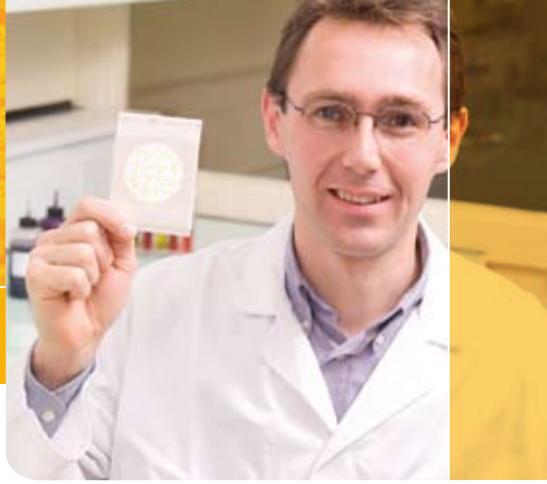


14 Read colonies. A colony counter or any other magnifier light source can be used. Refer to Guide to Interpretation when reading results.

Additional Comments

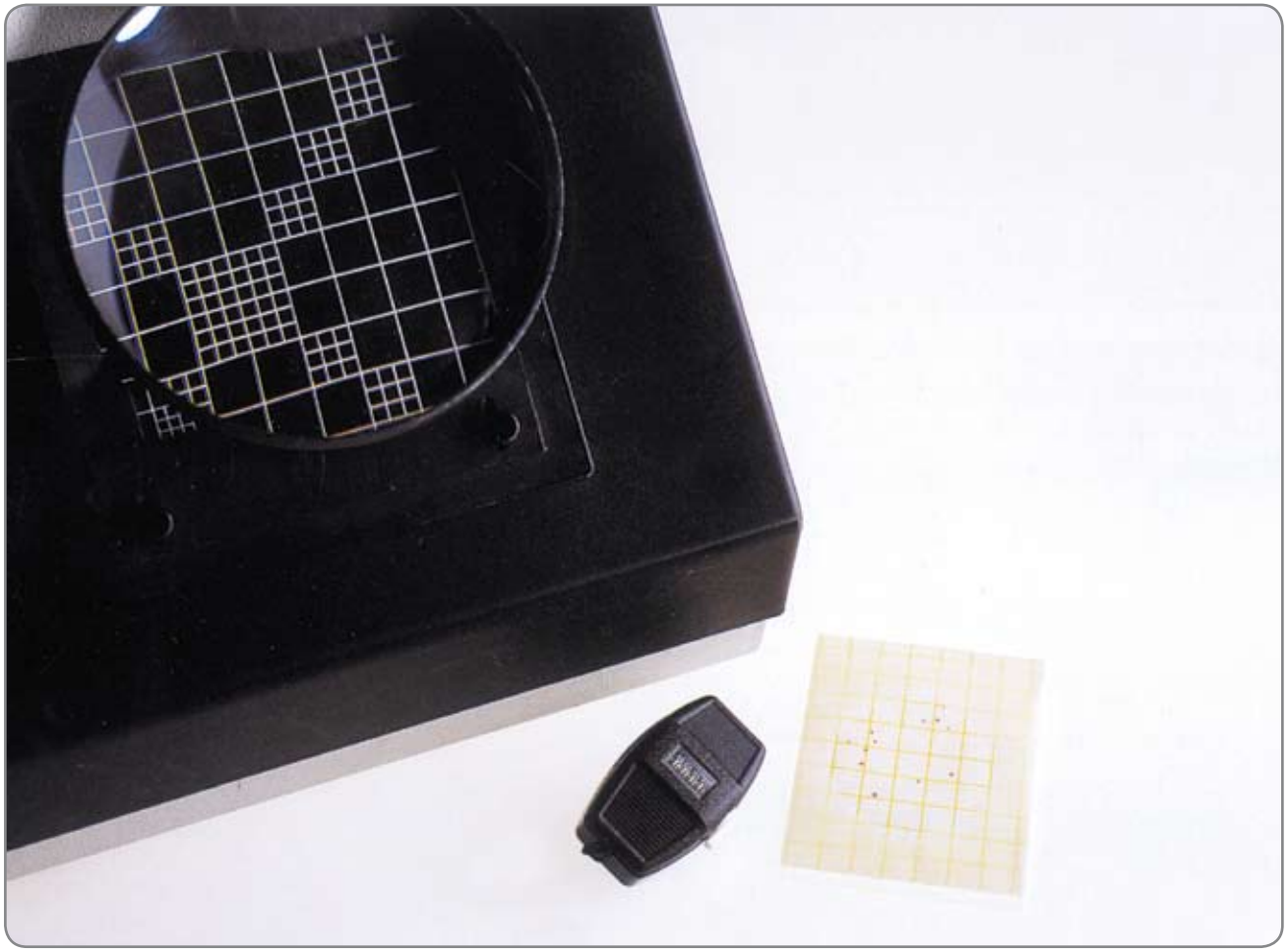
- Steps 9 and 10 are unique to Petrifilm Aerobic count plates.
- Note: Remember to inoculate and spread each Petrifilm count plate before going on to the next.

3M Deutschland GmbH
3M Microbiology
Carl-Schurz-Straße 1
41453 Neuss
Germany
Phone +49 (0) 2131/14 4350
Fax +49 (0) 2131/14 4397
Internet www.3m.com/microbiology



3M™ Petrifilm™ Interpretation Guide

3M™ Petrifilm™ Aerobic Count Plates



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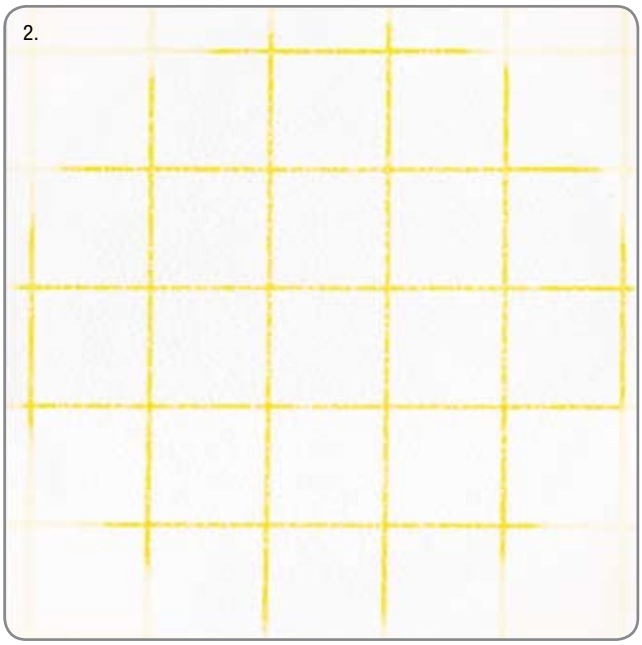
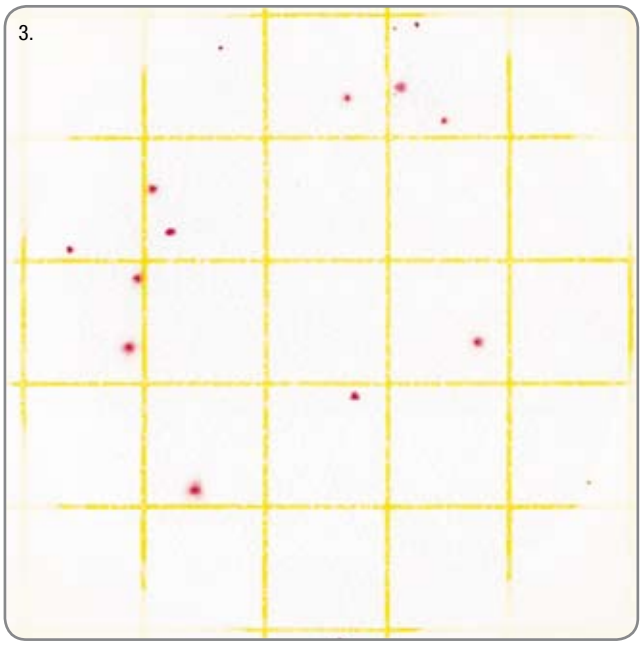
3M™ Petrifilm™ Aerobic Count Plates



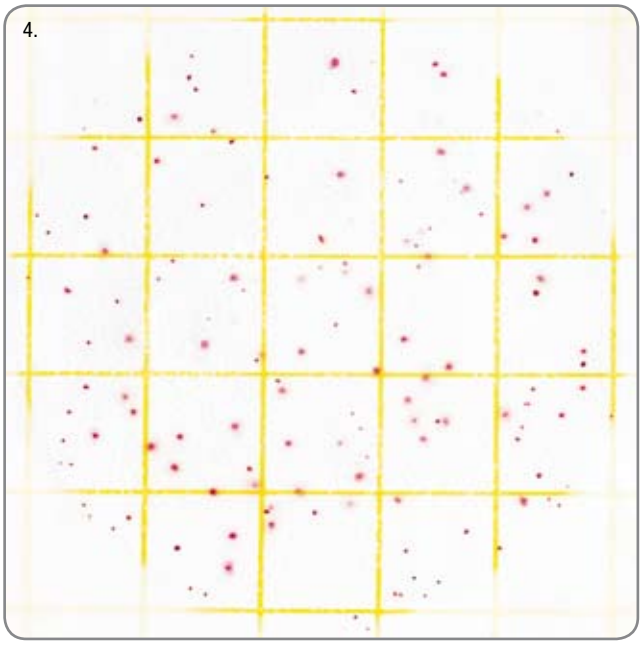
Count = 0

It is easy to interpret the Petrifilm Aerobic count plate. Figure 2 shows a Petrifilm Aerobic count plate without colonies.



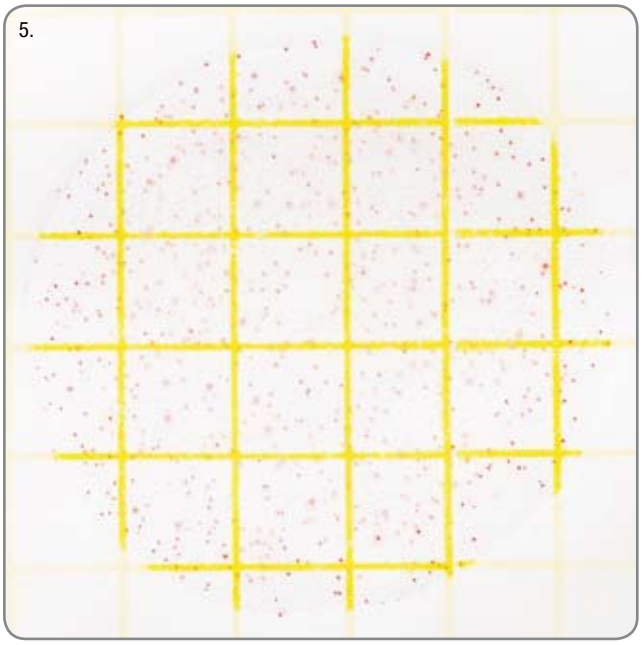
Count = 16

Figure 3 shows a Petrifilm Aerobic count plate with a few bacterial colonies. A red indicator dye in the count plate colours the colonies. Count all red colonies regardless of sizes or colour intensities. Use a standard Quebec-type counter to read the Petrifilm count plate.



Count = 143

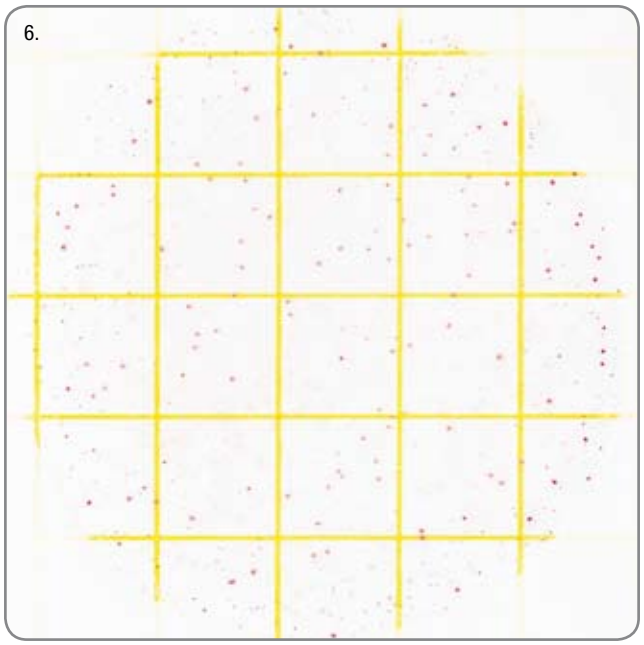
As with an agar pour plate, the preferable counting range on a Petrifilm Aerobic count plate is 10-300 colonies. See figure 4.



Estimated count = 420

When colonies number more than 300 as in figure 5, estimate the count. Determine the average number of colonies in one square (1 cm^2) and multiply it by 20 to obtain the total count per count plate. The inoculated area on a Petrifilm Aerobic count plate is approximately 20 cm^2.

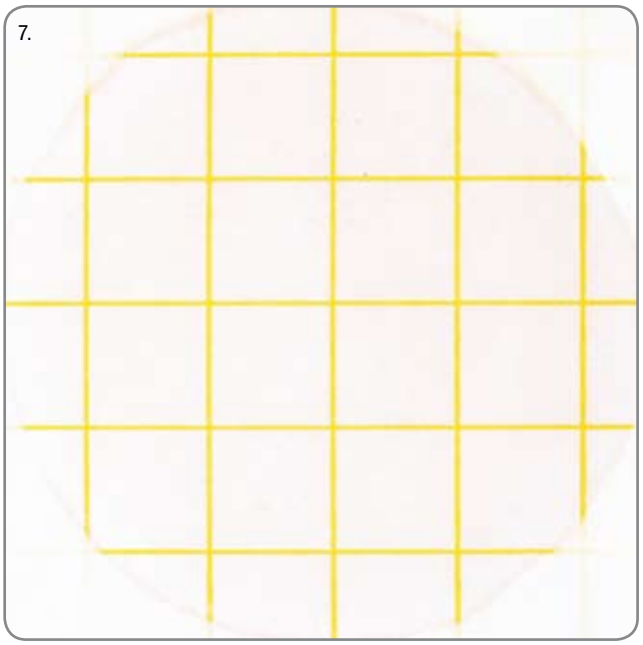
6.



Count = TNTC

Figure 6 shows a Petrifilm Aerobic count plate with colonies that are too numerous to count (TNTC).

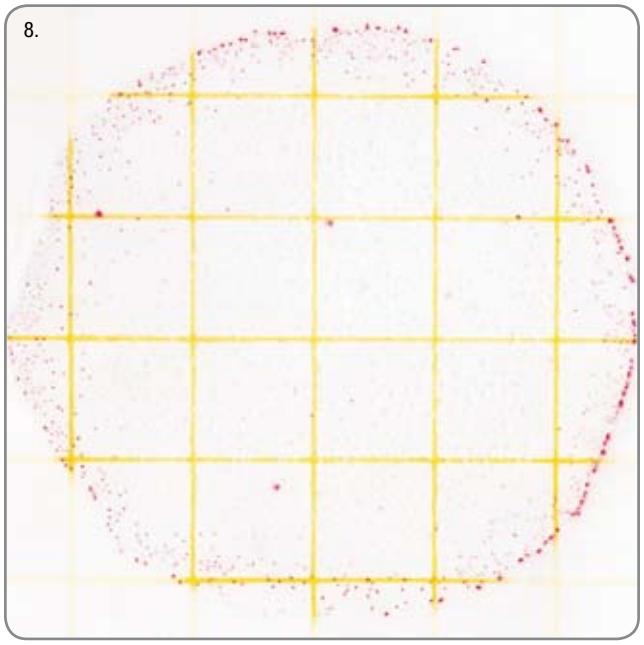
7.



Count = TNTC

With very high counts, the entire growth area may turn pink, as shown in figure 7. You might observe individual colonies only at the edge of the growth area. Record this as a TNTC result.

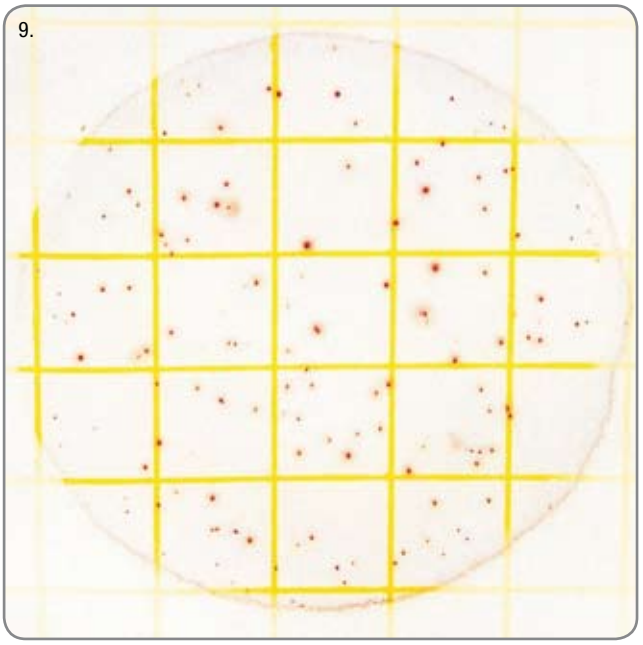
8.



Count = TNTC

Occasionally, distribution of colonies appears uneven as shown in figure 8. This is also an indication of a TNTC result. In fact, the distribution is even.

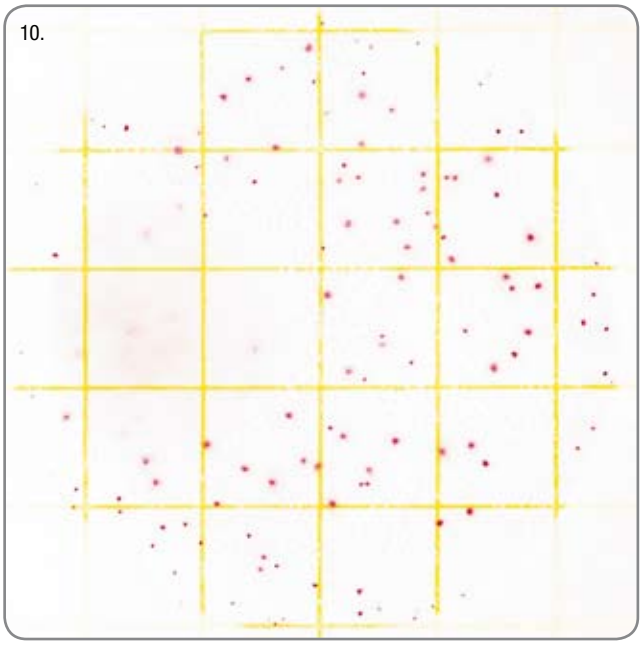
9.



Count = TNTC

The colonies on the Petrifilm Aerobic count plate in figure 9 appear countable at first glance. However, when you look closely at the edges of the growth area, you can see a high concentration of colonies. Record this as a TNTC result.

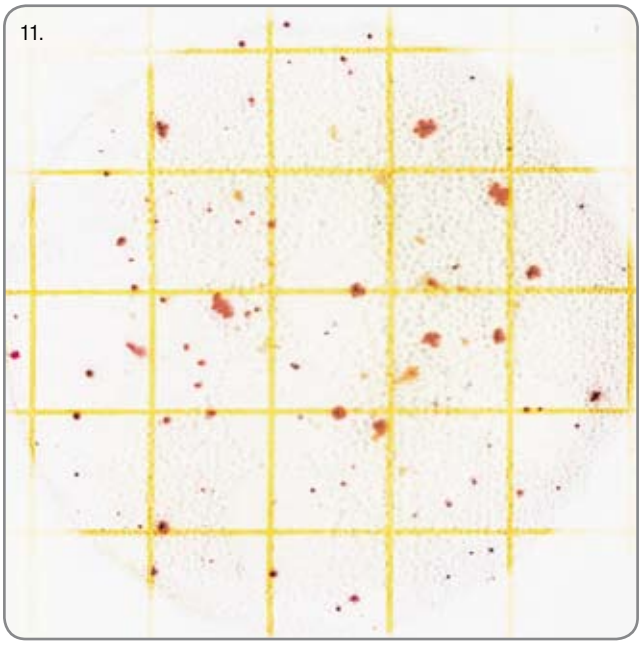
10.



Estimated count = 160

A few species of bacteria liquify the gel in the Petrifilm Aerobic count plate, as shown in figure 10. When this occurs, determine the average count in a few unaffected squares and then estimate the total count. Do not count red spots within the liquified area.

11.



Count = 83

Colonies on Petrifilm Aerobic count plates are red and can be easily distinguished from opaque food particles that may cause confusion with agar pour plates. See figure 11.