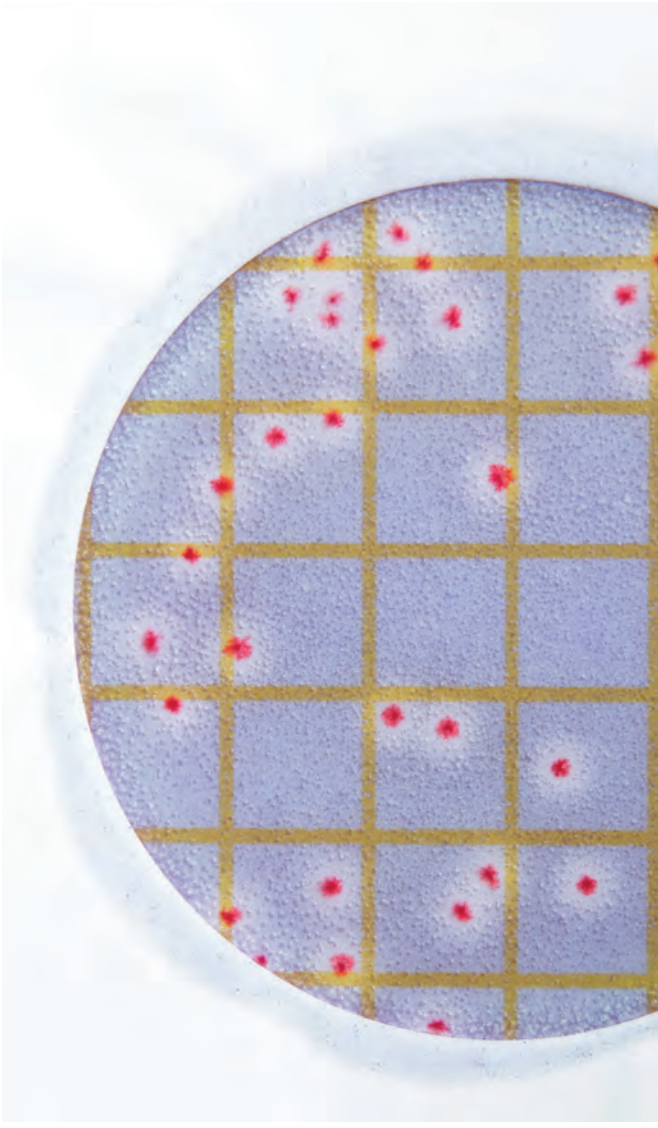
NEOGEN®

Petrifilm®

Interpretation Guide

The Neogen® Petrifilm® *Bacillus cereus* Count (BC) Plate is a selective and differential sample-ready-culture-medium system which contains nutrients, a cold-water-soluble gelling agent, chromogenic indicators and a lecithinase substrate that facilitates colony enumeration of *Bacillus cereus* group, also known as the *Bacillus cereus sensu lato* group, in as soon as 20 hours.



BC

***Bacillus cereus* Count Plate**

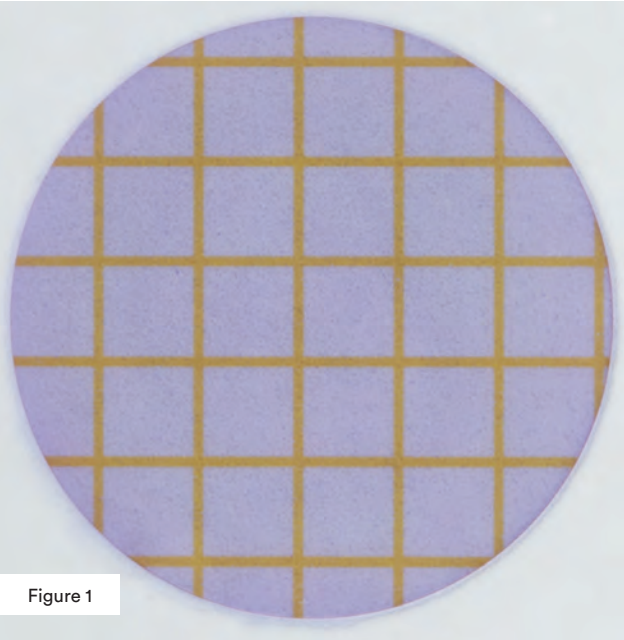


Figure 1

Bacillus cereus Count = 0

Figure 1 shows a *Bacillus cereus* Count Plate without colonies.

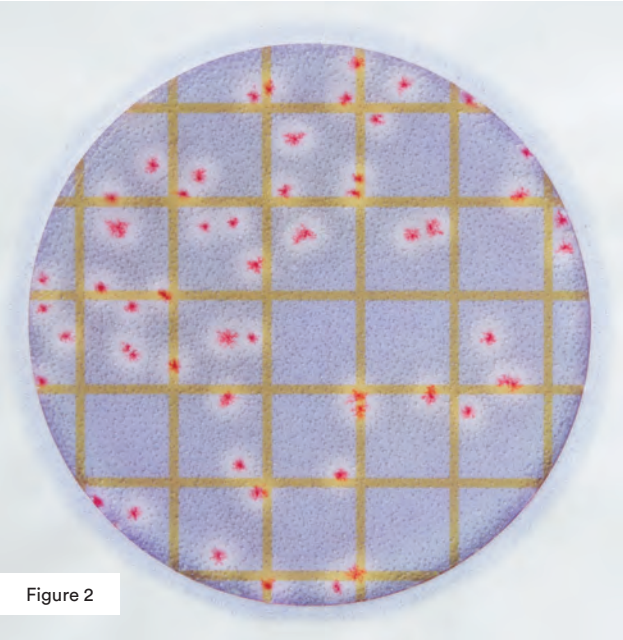


Figure 2

Bacillus cereus Count = 54

Count all red-violet colonies with a cream/white zone as *Bacillus cereus*.

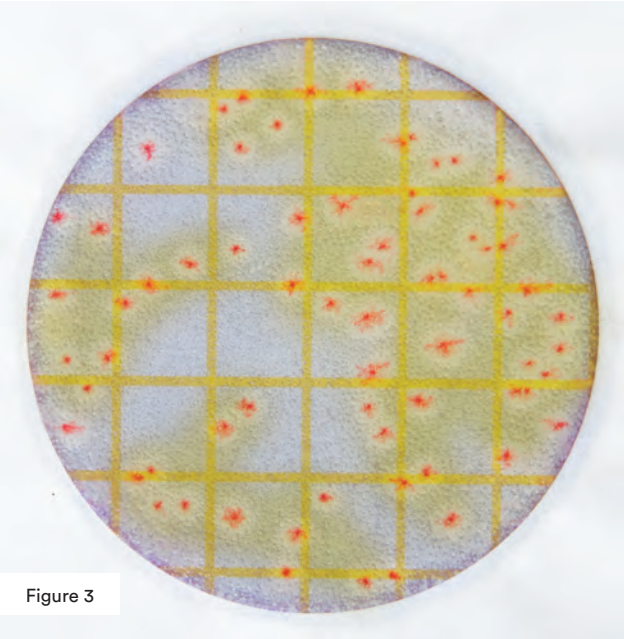


Figure 3

Bacillus cereus count = 69

Bacillus cereus colonies may occasionally be associated with a yellow acid zone in addition to the cream/white zone. Count all red-violet colonies with a cream/white zone as *Bacillus cereus*.

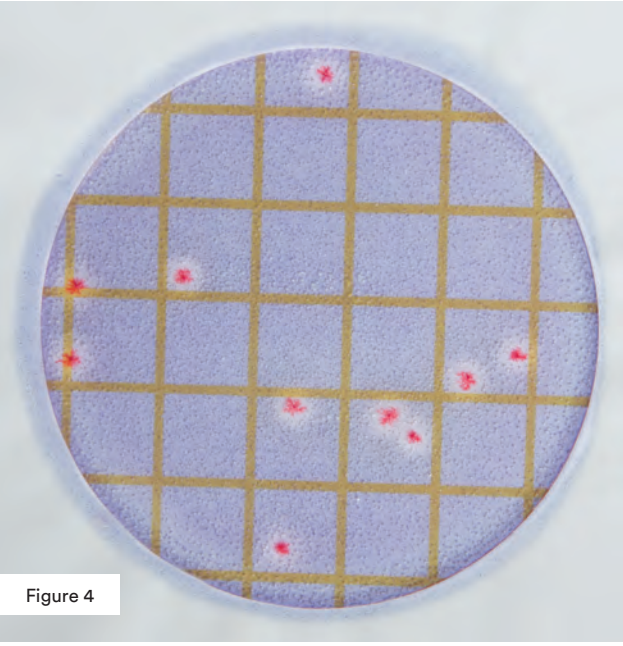


Figure 4

Bacillus cereus count = 10

Figure 4 shows a *Bacillus cereus* Count Plate with a few bacterial colonies.

Too Numerous Too Count (TNTC)

Petrfilm *Bacillus cereus* Count Plates that are TNTC may have one or more of the following characteristics: many small indistinct colonies, darkening of the outer edge and deepening of the gel color from blue-purple to dark purple.

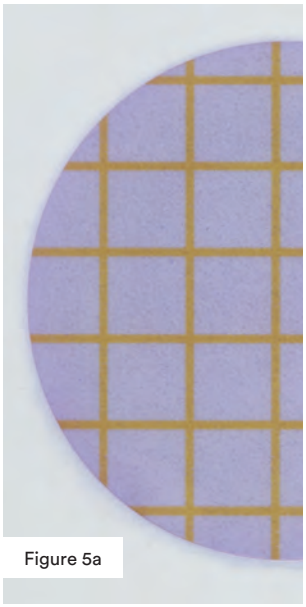


Figure 5a

Bacillus cereus count = 0

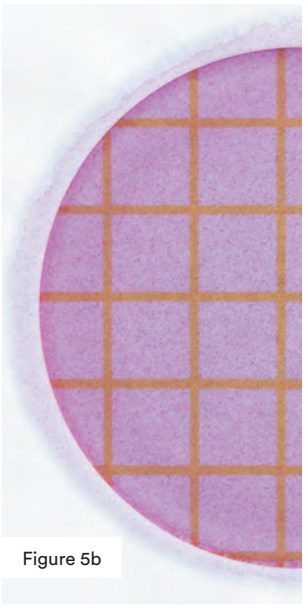


Figure 5b

Bacillus cereus count = TNTC

High concentrations of colonies on the plates will cause the entire growth area to turn blue-purple to deep purple.

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

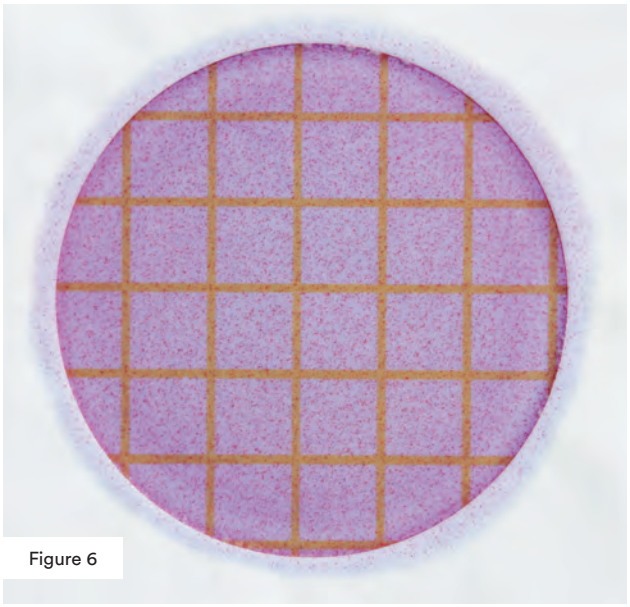


Figure 6

Bacillus cereus count = TNTC

The counting range on a Petrifilm *Bacillus cereus* Count Plate is less than or equal to 100 colonies.

High concentrations of colonies on the plate may appear as many small indistinct colonies on the plate.

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

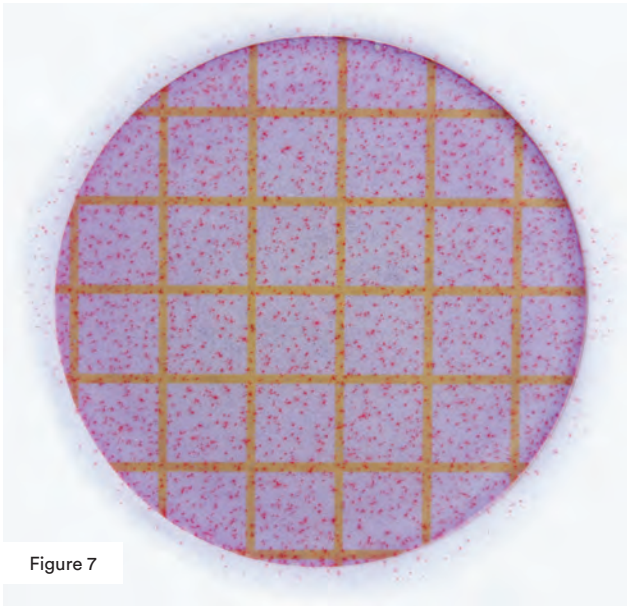


Figure 7

Bacillus cereus count = TNTC

The counting range on a Petrifilm *Bacillus cereus* Count Plate is less than or equal to 100 colonies.

High concentrations of colonies on the plate may appear as many small indistinct colonies on the plate.

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

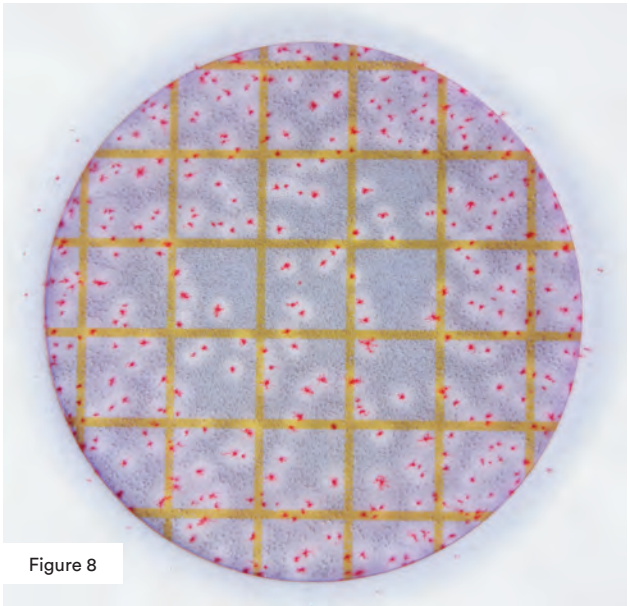


Figure 8

Bacillus cereus count = TNTC Estimated count = ~ 360

The circular growth area is approximately 30cm^2. Gridlines are visible with the use of a backlight to assist with estimated enumeration. Estimates can be made on Petrifilm *Bacillus cereus* Count Plates by counting the number of colonies in two or more representative squares and determining the average number per square. Multiply the average number by 30 to determine the estimated count per plate.

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

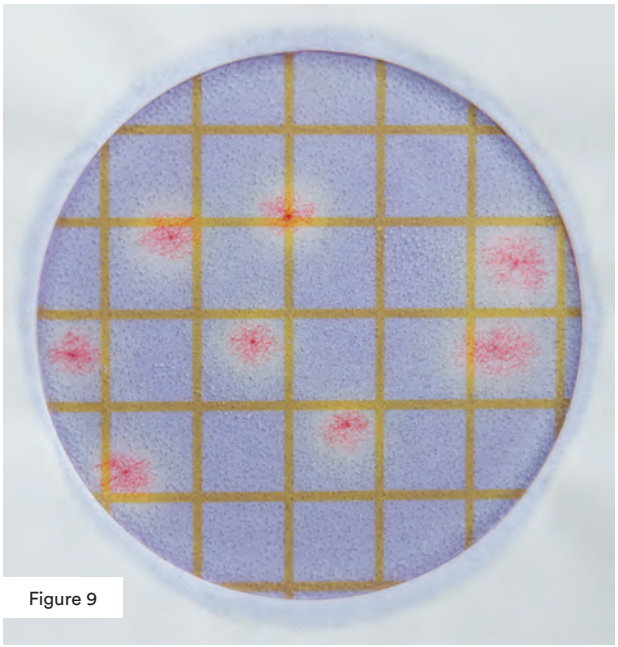


Figure 9

Bacillus cereus count = 8

Bacillus cereus may appear as large colonies. Count all red-violet colonies with a cream/white zone regardless of size and color intensity.

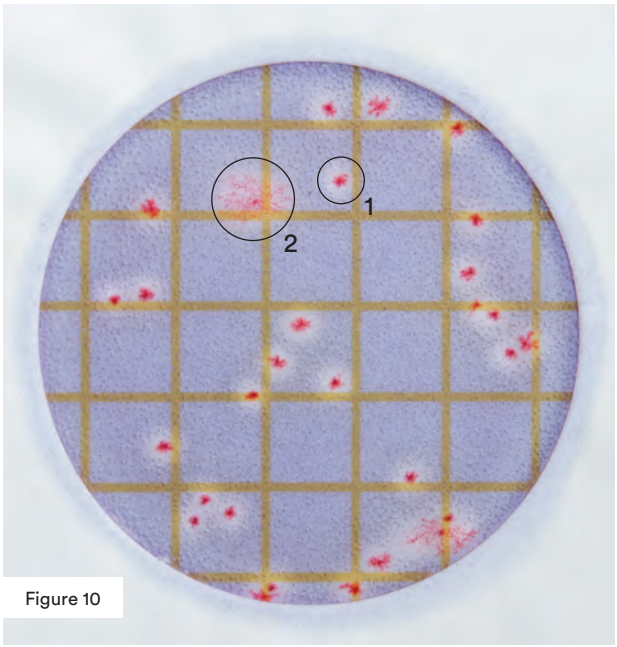


Figure 10

Bacillus cereus count = 29

Bacillus cereus colonies may be small (Circle 1) or large (Circle 2) in size. Count all red-violet colonies with a cream/white zone regardless of size and color intensity.

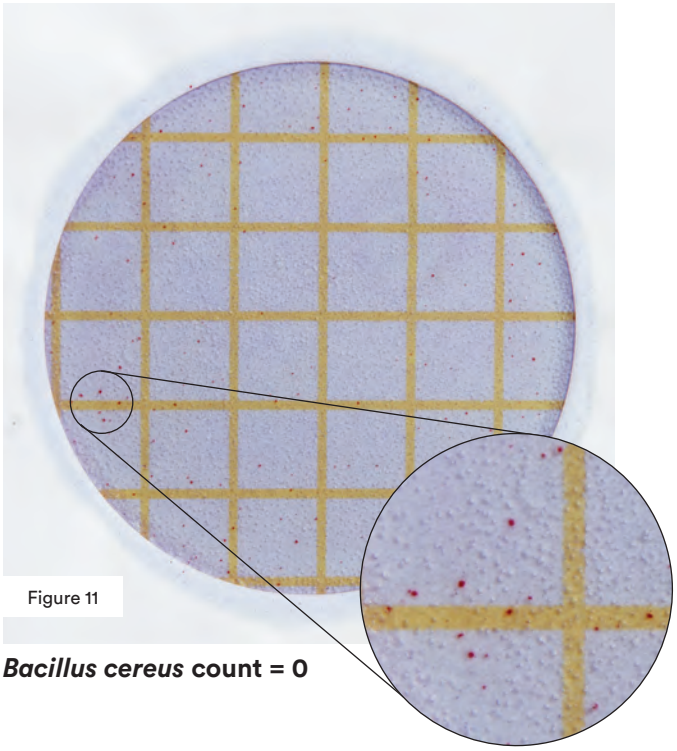


Figure 11

Bacillus cereus count = 0

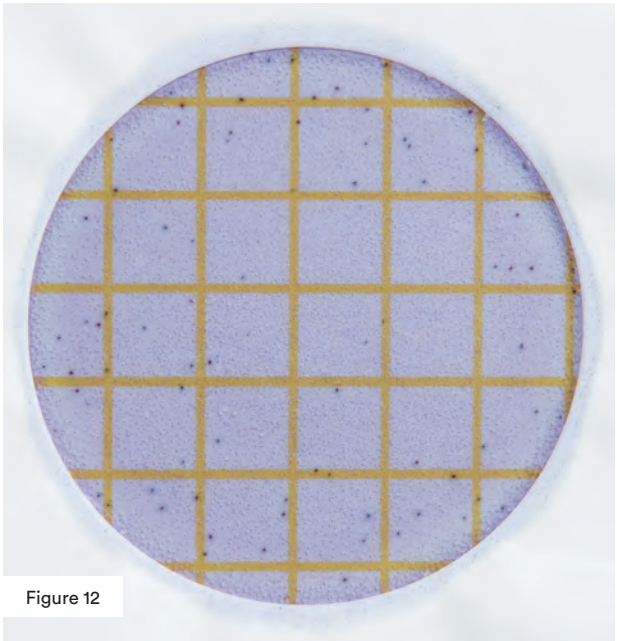


Figure 12

Bacillus cereus count = 0

Non-*Bacillus cereus* colonies may be inhibited or may appear as red colonies without a cream/white zone (Figure 11) or as blue colonies (Fiugre 12). Do not interpret red colonies without a cream/white zone or blue colonies as *Bacillus cereus*.

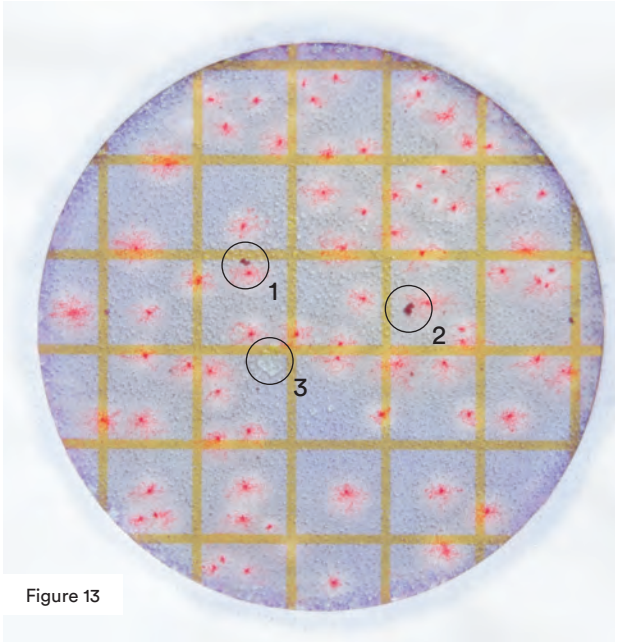


Figure 13

***Bacillus cereus* count = 75**

Food particles are irregularly shaped or filamentous (Circle 1 and 2). Do not enumerate food particles.

Artifact bubbles may result from improper inoculation or from trapped air within the sample. They are irregularly shaped and are not associated with a colony (Circle 3). Do not enumerate artifact bubbles.

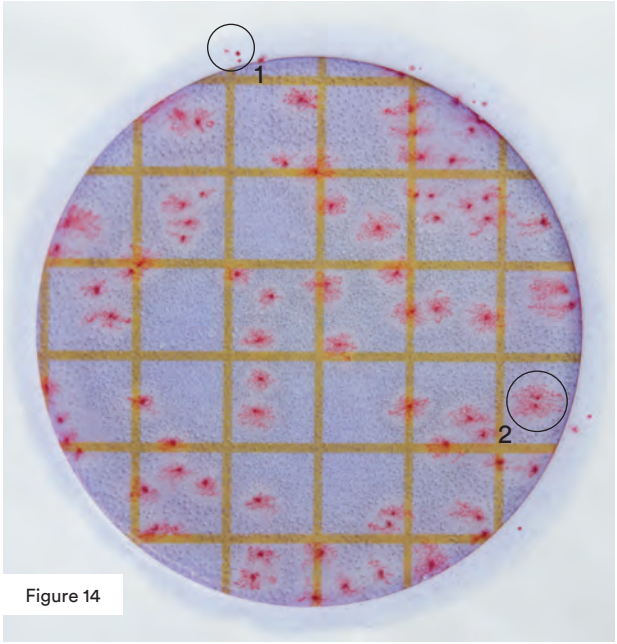


Figure 14

***Bacillus cereus* count = 65**

Do not count colonies on the foam barrier (Circle 1) because they are removed from the selective influence of the medium.

Colonies in close proximity of one another may share a cream/white zone (Circle 2) and should be counted as two colonies.

B. cytotoxicus: 30°C

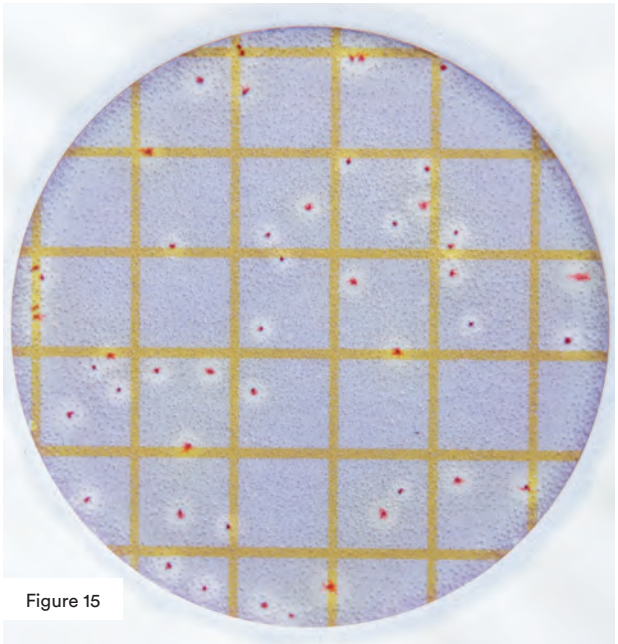


Figure 15

***Bacillus cereus* count = 49**

B. cytotoxicus: 35°C

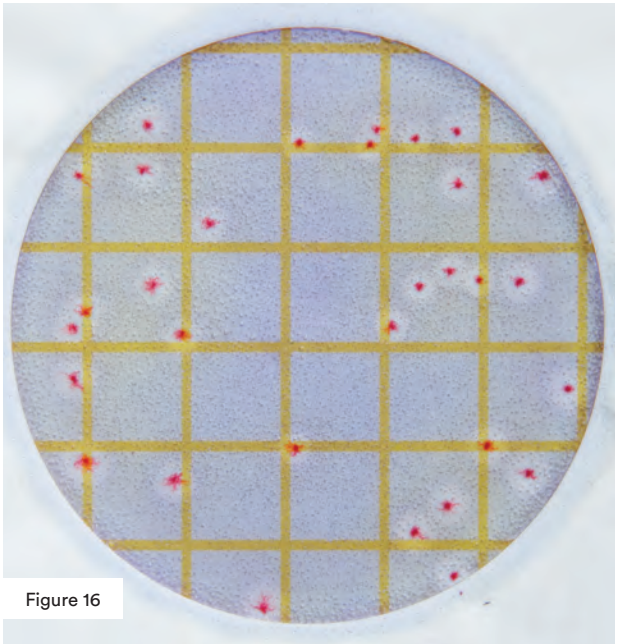


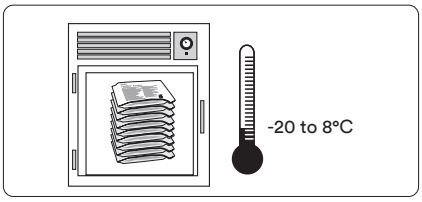
Figure 16

***Bacillus cereus* count = 31**

Bacillus cytotoxicus may occasionally exhibit a darker red-purple color with a distinct cream/white zone at 30°C±1°C (Figure 15) with typical morphology and appearance at 35°C±1°C (Figure 16) .

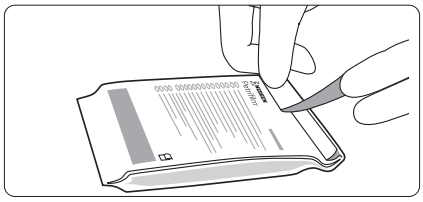
Reminders For Use

Storage



01

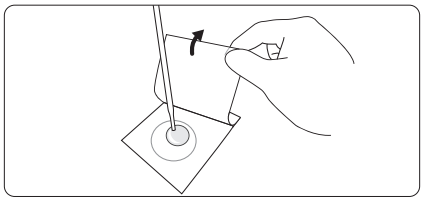
Store the **unopened** Petrifilm *Bacillus cereus* Count Plate pouches at frozen or refrigerated temperature equal to -20 to 8°C (-4 to 46°F). Use before expiration date on package. It is best to allow pouches to reach room temperature before opening.



02

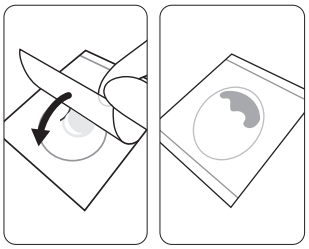
Seal by folding the end of the pouch over and applying adhesive tape. To prevent exposure to moisture, do not refrigerate opened pouches. Store resealed pouches in a cool dry place (20–25°C/<60% RH) for no longer than four weeks.

Inoculation



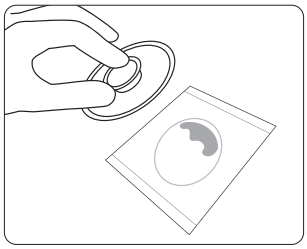
03

Place the Petrifilm *Bacillus cereus* Plate on **level** surface. Lift the top film and with the pipette **perpendicular** dispense 1 mL of sample suspension onto the center of bottom film.



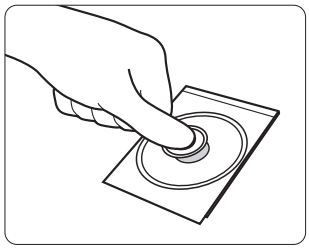
04

Roll top film down onto sample **gently** to prevent pushing sample off film and to avoid entrapping air bubbles.



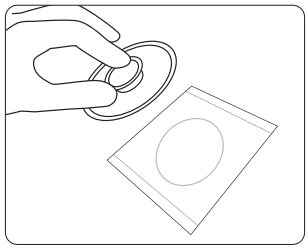
05

Place the Petrifilm Flat Spreader on the center of the Petrifilm *Bacillus cereus* Count Plate.



06

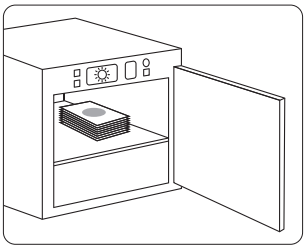
Gently apply pressure on spreader to distribute inoculum over circular area. **Do not** twist or slide the spreader.



07

Lift spreader. Wait a minimum of one minute for gel to solidify.

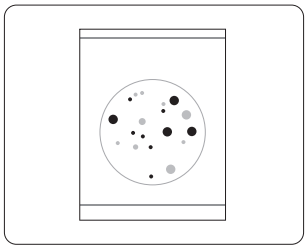
Incubation



08

Incubate plates with clear sides up in stacks up to 10. **Please refer to the product instructions for third party validated methods.**

Interpretation



09

Petrifilm *Bacillus cereus* Count Plates can be counted on a benchtop, or using a standard colony counter or other illuminated magnifier.

Use Appropriate Sterile Diluents

Butterfield's phosphate buffer, buffered peptone water, 0.1% peptone water, peptone salt diluent, saline solution (0.85–0.90%), bisulfite-free letheen broth or distilled water.

Do not use diluents containing citrate, bisulfite or thiosulfate with the Petrifilm *Bacillus cereus* Count Plates; they can inhibit growth.

If needed, adjust the pH of the sample suspension to a pH greater than pH 5.

User's Responsibilities: Neogen 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 and results meet the user's requirements. Should re-printing of this Interpretation Guide be necessary, user's print settings may impact picture and color quality.

Neogen offers a full line of products to accomplish a variety of your microbial testing needs.

For more product information, visit **info.neogen.com/petrifilm**

NEOGEN®

For detailed CAUTIONS, DISCLAIMER OF WARRANTIES/LIMITED REMEDY and LIMITATION OF NEOGEN LIABILITY, STORAGE AND DISPOSAL information and INSTRUCTIONS FOR USE, see product instructions.

Neogen Corporation, 620 Lesher Place, Lansing, MI 48912 USA.

FS01457_0724