

3M™ Petrifilm™ Staph Express Count System



The Petrifilm Staph Express count system consists of a Petrifilm Staph Express count plate and a Petrifilm Staph Express disk.

The Petrifilm Staph Express count plate is a sample-ready culture medium system. The chromogenic, modified Baird-Parker medium in the count plate is selective and differential for *Staphylococcus aureus*. *Staphylococcus aureus* appears as red-violet colonies on the count plate (figure 1). Colonies other than red-violet colonies may appear on the count plates (figure 5).

The Petrifilm Staph Express disk is designed for the detection of desoxyribonuclease (DNase) reactions specific for *Staphylococcus aureus* isolated on the Petrifilm Staph Express count plate; it contains toluidine blue-O that facilitates the visualization of the DNase reactions (figure 2). The Petrifilm Staph Express disk must be used whenever colonies other than red-violet are present on the count plate.

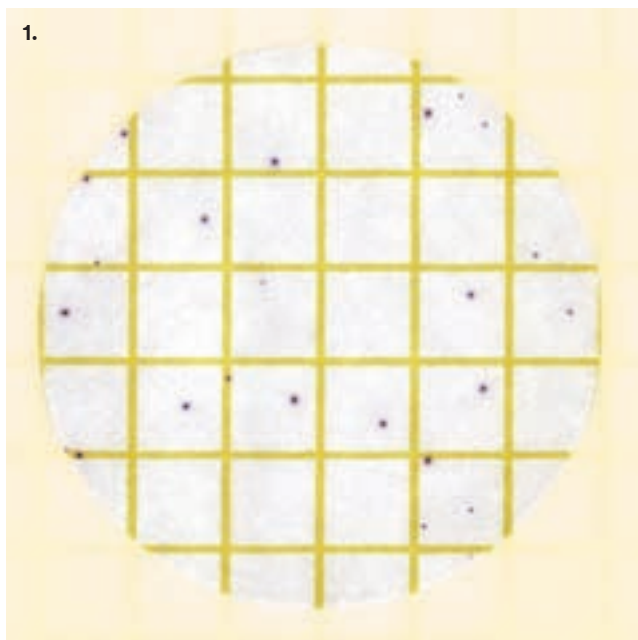


Figure 1 shows red-violet colonies of *S. aureus*. *S. aureus* colonies may vary in size.

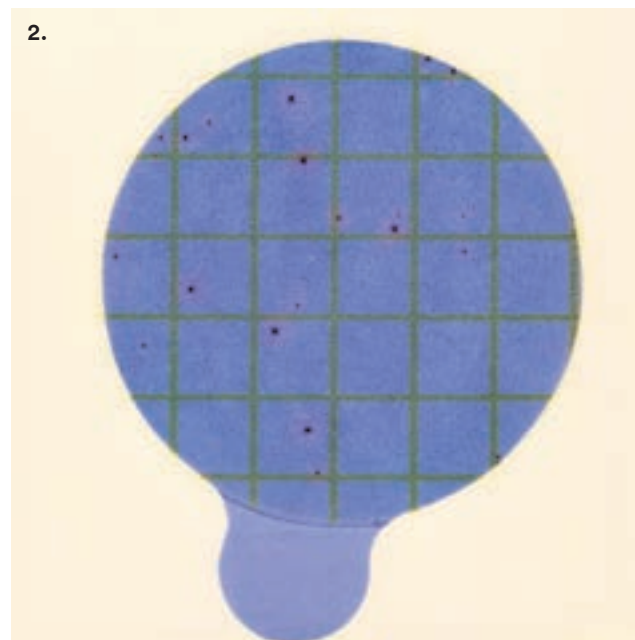
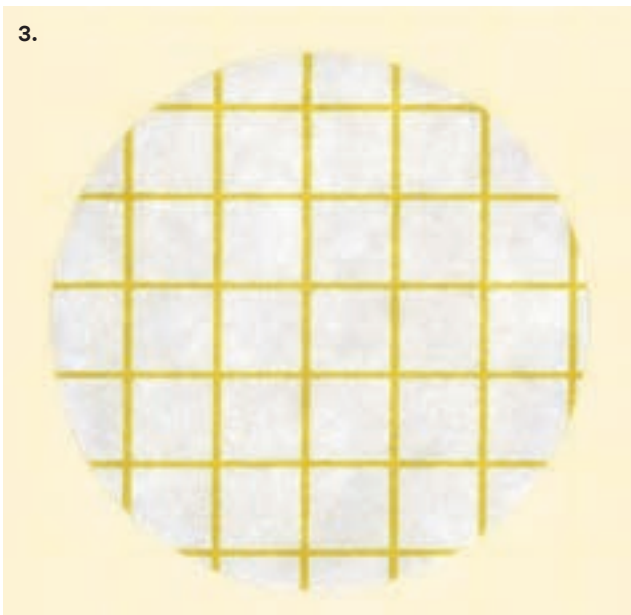


Figure 2 shows pink zones which form when DNase reaction from *S. aureus*. Pink zones may be various sizes because different *S. aureus* produce DNase at varying rates.

Interpretation of 3M™ Petrifilm™ Staph Express Count System

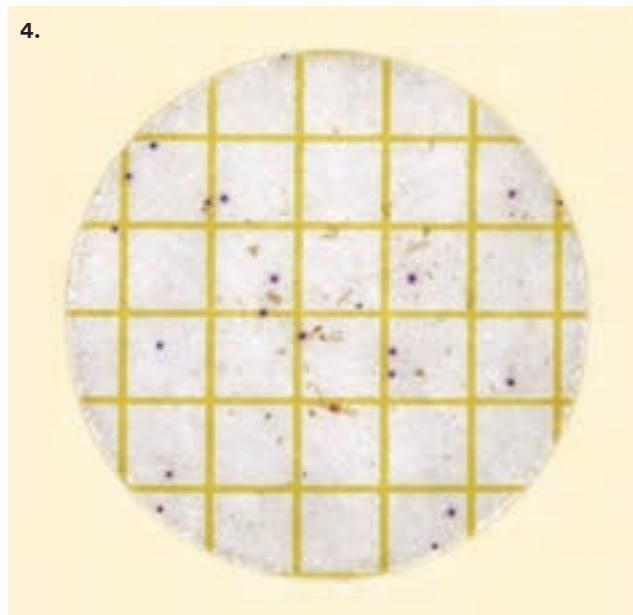
1. Colony count on Petrifilm Staph Express Count Plates

After 24 hours incubation of the count plates, if **only red-violet colonies** appear, proceed to numeration. To enumerate *Staphylococcus aureus*, count all red-violet colonies. Use an illuminated magnifier so that the colonies are easier to see.



***S. aureus* count = 0**

Figure 3 shows a Petrifilm Staph Express count plate with no colonies after 24 hours of incubation.



***S. aureus* count = 20**

Figure 4 shows a Petrifilm Staph Express count plate with only red-violet colonies. Count all red-violet colonies regardless of size as *S. aureus*. Also visible on this count plate are irregularly shaped food particles.

2. DNase pink zones count on Petrifilm Staph Express count system

Whenever colonies other than red-violet are seen on the count plate, use a test Petrifilm Staph Express disk to count *Staphylococcus aureus*. Figures 5 and 6 show the same Petrifilm Staph Express count system before and after using the disk.

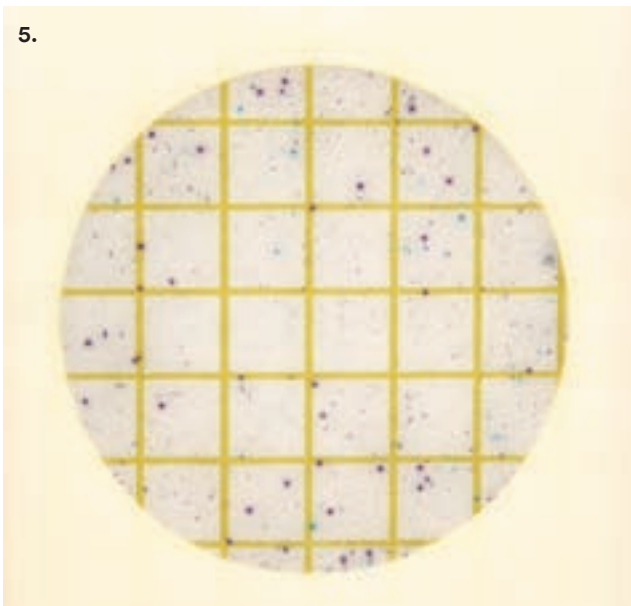
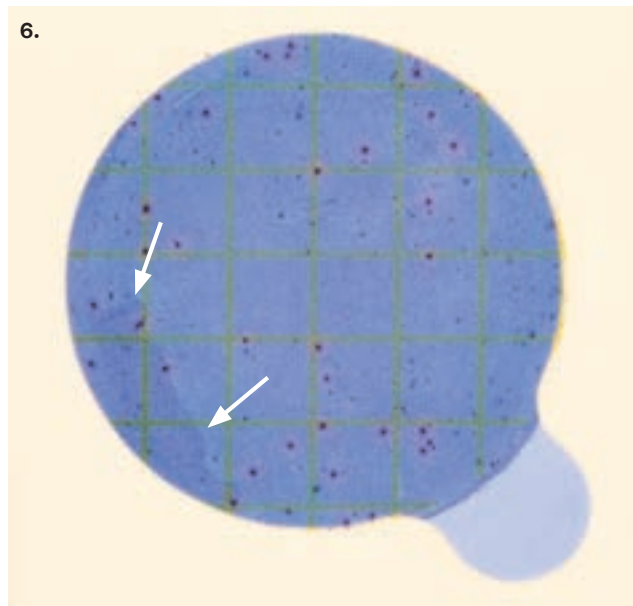


Figure 5 shows the different colony colours which may appear on Petrifilm Staph Express count plates

- Red-violet colonies are *S. aureus*.
- Blue-green colonies are not *S. aureus*.
- Black colonies may or may not be *S. aureus*.

In this case, a disk must be used before counting *S. aureus*.



***S. aureus* count = 33**

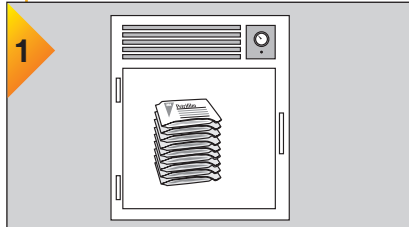
Figure 6 shows 33 pink zones produced by the same number of *S. aureus* colonies. Count all pink zones as *S. aureus*. The arrows in the figure show gel splitting. Gel splitting does not affect the performance.

3M™ Petrifilm™ Staph Express Count System

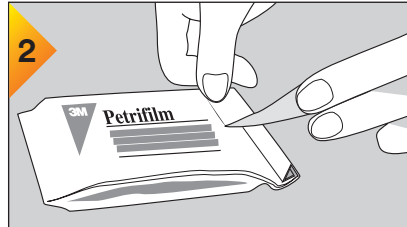
For detailed **WARNINGS, CAUTIONS, DISCLAIMER OF WARRANTIES / LIMITED REMEDY, LIMITATION OF 3M LIABILITY, STORAGE AND DISPOSAL** information, and **INSTRUCTIONS FOR USE** see product's package insert.



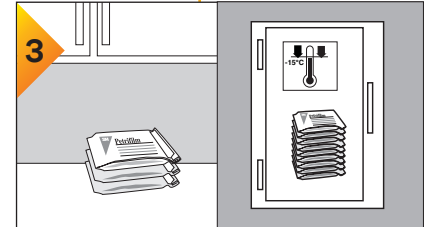
Storage



1 Store unopened packages of count plates and disks at $\leq 8\text{ }^{\circ}\text{C}$. Use before expiration date on package. Prior to use, it is best to allow unopened pouches of count plates to come to room temperature before opening to avoid condensation.



2 To seal opened package, fold end over and tape shut.



3 Count plates: Store resealed packages in a cool dry place ($\leq 25\text{ }^{\circ}\text{C}$) for no longer than one month.

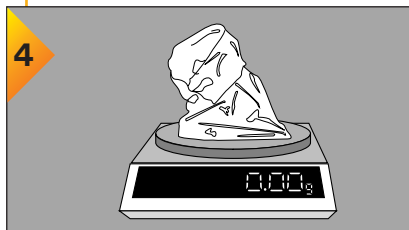
Do not refrigerate opened packages.

Store them in a freezer if the laboratory temperature exceeds $25\text{ }^{\circ}\text{C}$ and/or the laboratory is located in an area where the humidity frequently exceeds 50%.

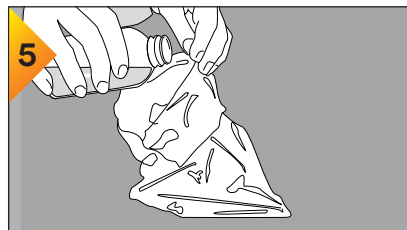
Disks: Store resealed packages in a freezer ($\leq -15\text{ }^{\circ}\text{C}$) for no longer than six months.

Do not store opened packages of disks at room temperature.

Sample Preparation

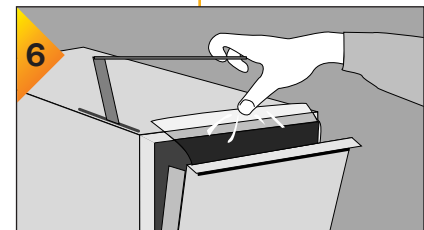


4 Prepare a 1:10 or greater dilution. Weigh or pipette food product into an appropriate sterile container such as stomacher bag, dilution bottle, or other sterile container.



5 Add appropriate quantity of one of the following sterile diluents recommended as diluents for general use (ISO 6887 and ISO 8261), such as peptone salt diluent (MRD) and buffered peptone water. Other diluents may also be used such as, for example, bisulfite-free letheen broth.

Do not use buffers containing citrate, bisulphite or thiosulphate; they can inhibit growth.

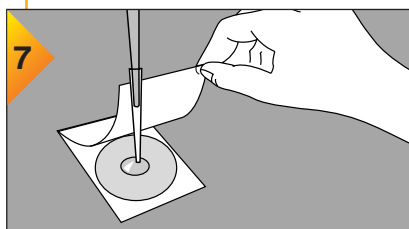


6 Blend or homogenize sample as per current procedure.

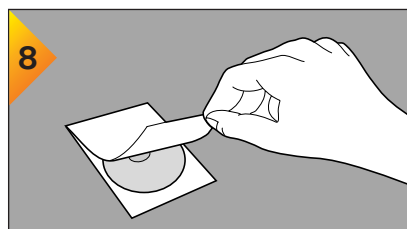
Adjust pH of the diluted sample between 6 and 8:

- for acid products, use NaOH 1N,
- for alkaline products, use HCl 1N.

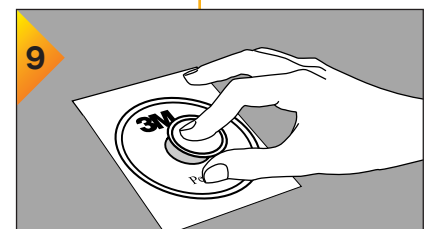
Inoculation



7 Place Petrifilm plate on level surface. Lift top film. With pipette perpendicular to Petrifilm plate, place 1mL of sample onto center of bottom film.



8 Carefully roll top film down to avoid trapping air bubbles. Do not let top film drop.

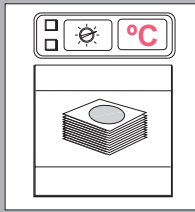


9 Gently apply pressure to the spreader to distribute inoculum over circular area before gel forms. Do not twist or slide the spreader. Lift spreader. Wait at least one minute for gel to solidify.

Note: Spread the sample on each individual count plate before inoculating the next. This is important as the gel in the Petrifilm Staph Express count plate forms quickly.

Incubation

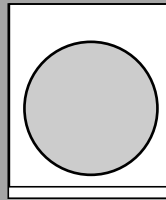
10



Incubate count plates with clear side up in stacks of up to 20. Incubate for 24h ± 2h at 37 °C ± 1 °C.

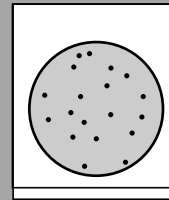
Interpretation

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If no colonies are present after 24 ± 2 hours of incubation, the count is zero and the test is complete.

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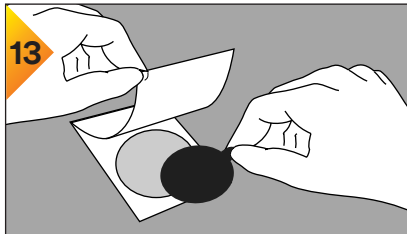


If no colony other than red-violet ones are visible, count them as *S. aureus*. The test is complete. Count plates can be counted with a standard colony counter or other illuminated magnifier. Refer to the Interpretation Guide section when reading results.

Disk Use

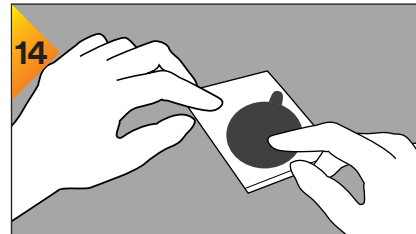
- If any colony colours besides red-violet are present, use a Petrifilm Staph Express disk (see 13-16).

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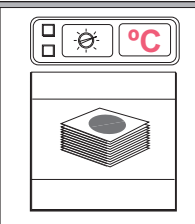
Remove a disk from its individual package by grasping the tab. Lift the top film of the Petrifilm count plate and place the disk in the well of the count plate. Lower the top film.

14



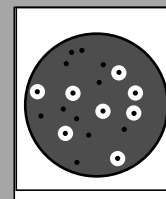
Apply pressure to the disk area, including the edges of the disk, by sliding a finger firmly across the top film. This will ensure uniform contact of the disk with the gel and will eliminate any air bubbles.

15



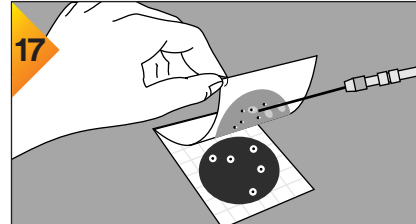
Incubate count plates with inserted disks in stacks of no more than 20 count plates for 3 hours at 37 °C ± 1 °C.

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Count all pink zones whether or not colony is present as *S. aureus*. Refer to the Interpretation Guide section when reading results.

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Colonies may be isolated for further identification. Lift top film and pick the colony from the gel. Test using standard procedures.

3M

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User's responsibility :

3M plate has not been evaluated with all combinations and food matrices. It is the user's responsibility to determine that any test methods and results meet the user's requirement

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