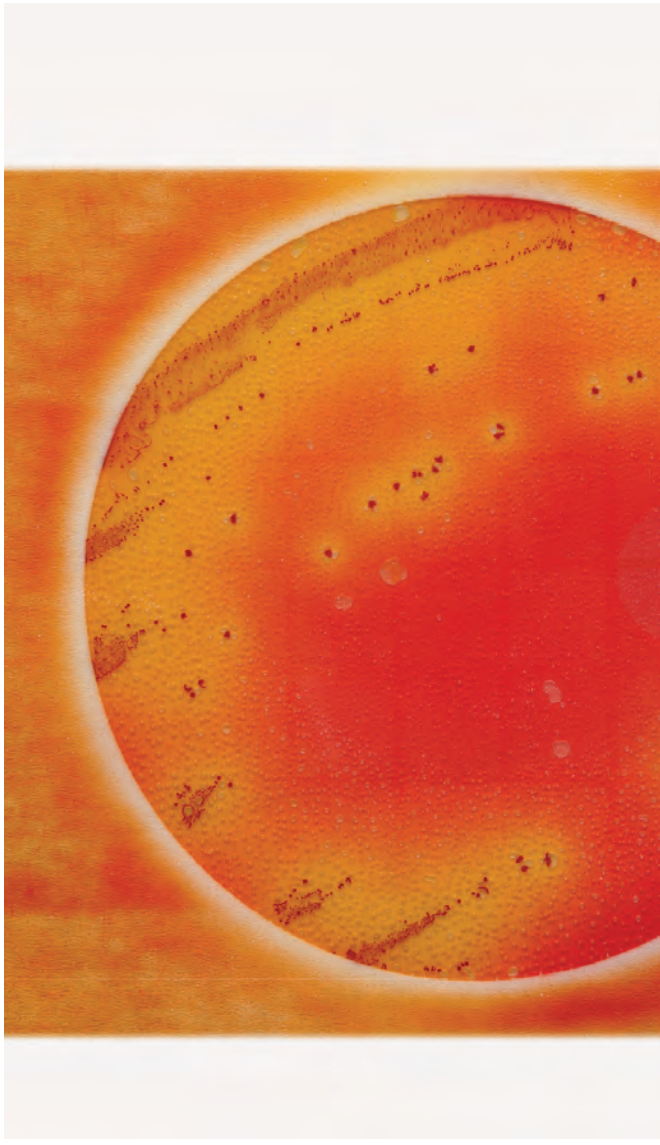
NEOGEN®

Petrifilm®

Interpretation Guide

The Neogen® Petrifilm® *Salmonella* Express System is a qualitative pathogen test used for the rapid detection and biochemical confirmation of *Salmonella* in enriched foods and food process environmental samples.



SALX

***Salmonella* Express System**

Petrifilm *Salmonella* Express System consists of:

- *Salmonella* Enrichment Base and *Salmonella* Enrichment Supplement — a unique medium for recovery and growth of *Salmonella* species
- Petrifilm *Salmonella* Express Plate — a sample ready-to-use chromogenic culture medium system that contains a cold-water-soluble gelling agent and is selective and differential for *Salmonella*, providing a presumptive result
- Petrifilm *Salmonella* Express Confirmation Disk — a biochemical substrate that facilitates the biochemical confirmation of *Salmonella* organisms

Colony Examples

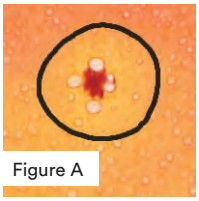


Figure A

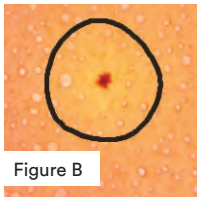


Figure B

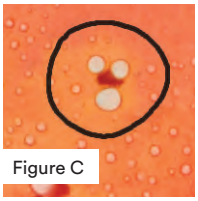


Figure C

Presumptive Positive Colonies on Plate

Figure A: Red colony with yellow zone and associated gas bubble.
Figure B: Red colony with yellow zone.
Figure C: Red colony and associated gas bubble, no yellow zone.

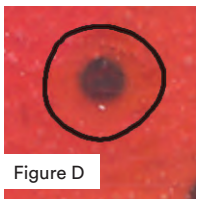


Figure D

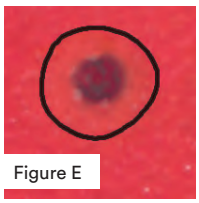


Figure E

Confirmed *Salmonella* Colonies with Confirmation Disk

Figure D: Dark blue/black colony with blue precipitate.
Figure E: Dark blue/black colony with dark red center and blue precipitate.

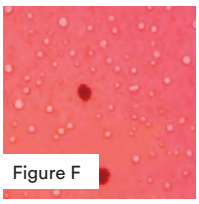


Figure F

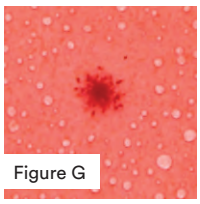


Figure G

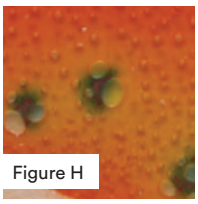


Figure H

Non-*Salmonella* Colonies on Plate

Figure F: Red colony with no yellow zone and no associated gas bubble.
Figure G: Red colony with a magenta zone.
Figure H: Blue-green colony with yellow zone and associated gas bubble.

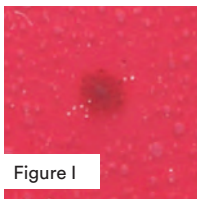


Figure I

Non-*Salmonella* Colony with Confirmation Disk

Figure I: Colony remains same red color without blue precipitate after adding confirmation disk.

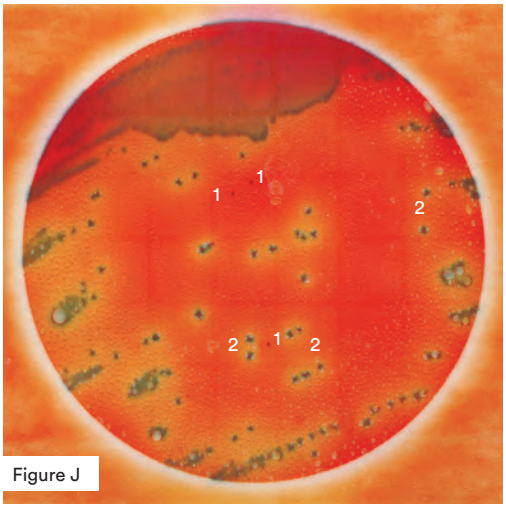


Figure J

Petrifilm *Salmonella* Express Plate with No Presumptive Positives

Figure J: (1) Isolated red colonies with no yellow zone and/or associated gas bubble. (2) Blue-green colonies with associated gas bubble.

Interpretation of Presumptive Positive *Salmonella* Species

Colony Color			Colony Metabolism		Result
Red	Dark Red	Brown	Yellow Zone	Gas Bubble	
•			•		Presumptive +
•				•	Presumptive +
•			•	•	Presumptive +
	•		•		Presumptive +
	•			•	Presumptive +
	•		•	•	Presumptive +
		•	•		Presumptive +
		•		•	Presumptive +
		•	•	•	Presumptive +

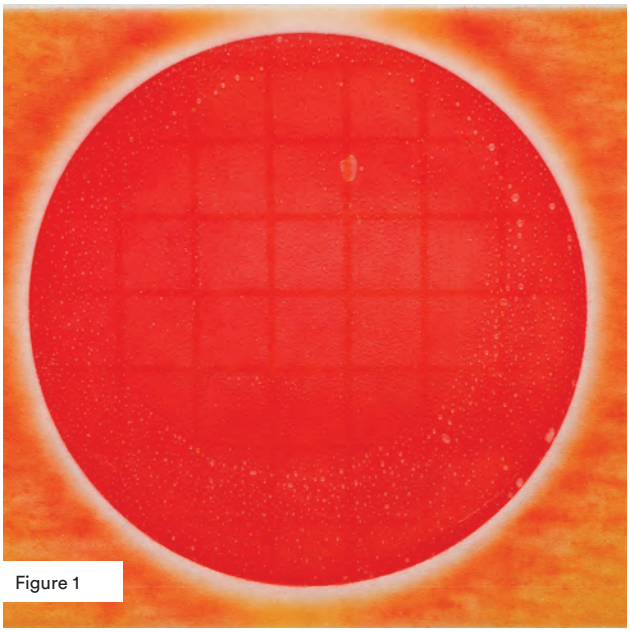


Figure 1

Petrifilm *Salmonella* Express Plate

Negative control plate hydrated with 2 mL diluent.

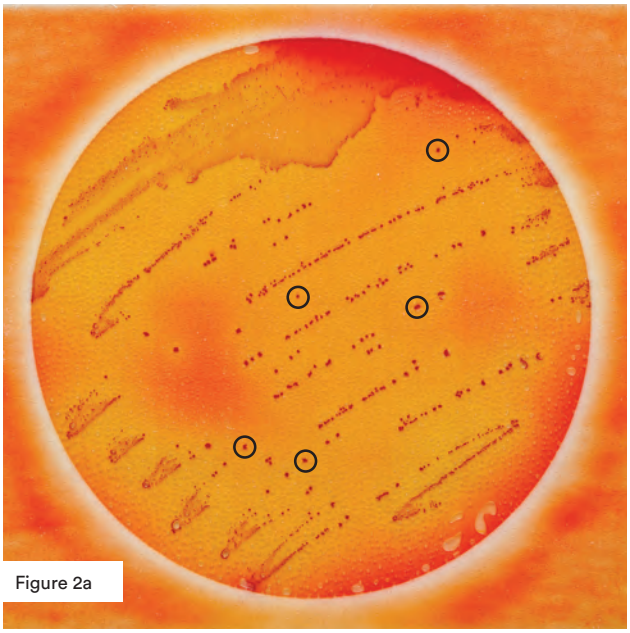


Figure 2a

Petrifilm *Salmonella* Express Plate with Presumptive Positive Colonies Circled

This plate has only presumptive positive colonies present. The five (5) most predominate isolated presumptive positive colony morphologies (red with yellow zone) have been circled on the plate's top film.

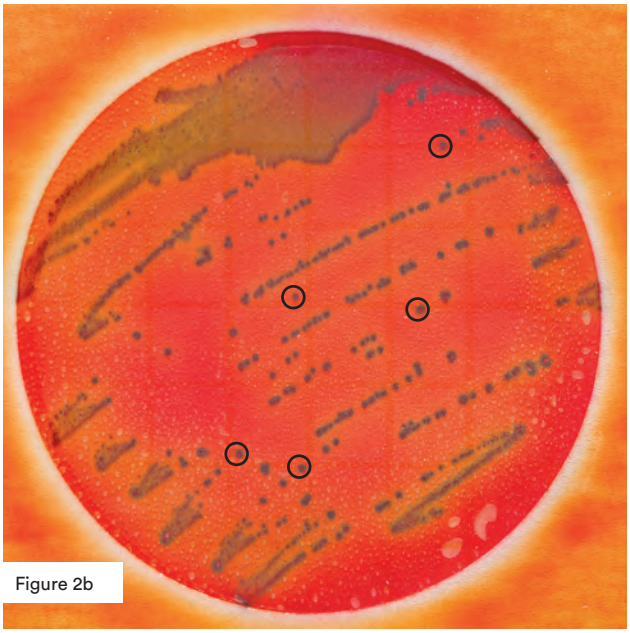


Figure 2b

Petrifilm *Salmonella* Express Plate with Petrifilm *Salmonella* Express Confirmation Disk

Circled presumptive positive colonies are blue to dark blue/black with a blue precipitate after the addition and incubation of the Petrifilm *Salmonella* Express Confirmation Disk. These circled colonies are biochemically confirmed positive for *Salmonella* species.

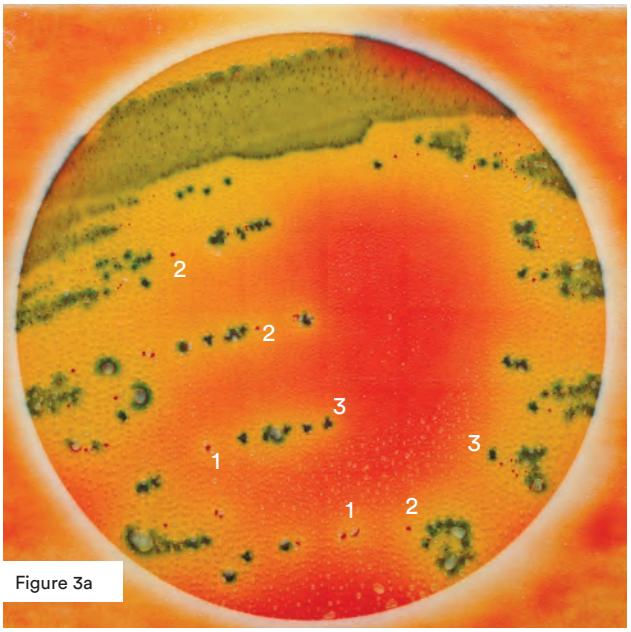


Figure 3a

Petrifilm *Salmonella* Express Plate with mixed colony morphologies

(1) Isolated red colonies with yellow zone and associated gas bubble (presumptive positive). (2) Isolated red colonies with yellow zone only (presumptive positive). (3) Background flora of blue, blue-green colonies.

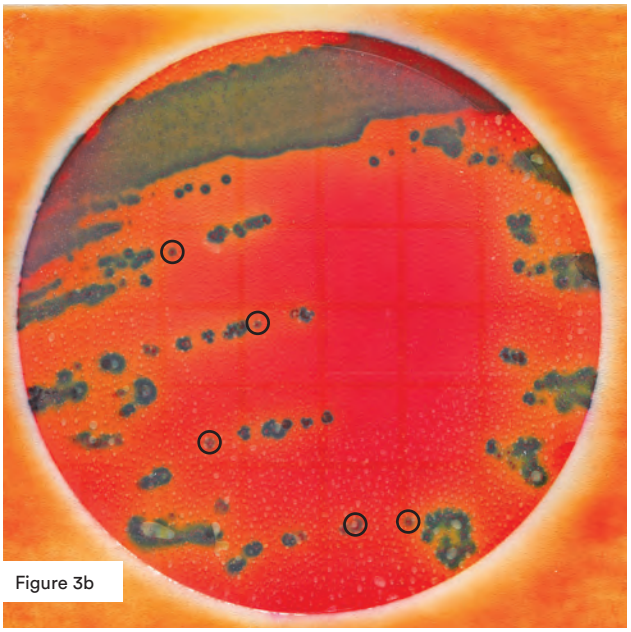


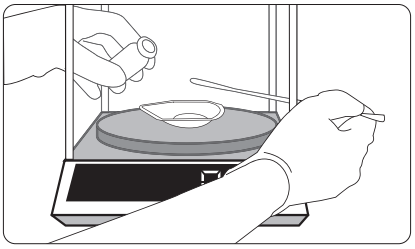
Figure 3b

Petrifilm *Salmonella* Express Plate with Petrifilm *Salmonella* Express Confirmation Disk

Circled presumptive positive colonies are blue to dark blue/black with blue precipitate after the addition and incubation of the Petrifilm *Salmonella* Express Confirmation Disk. These circled colonies are biochemically confirmed positive for *Salmonella* species.

Reminders For Use

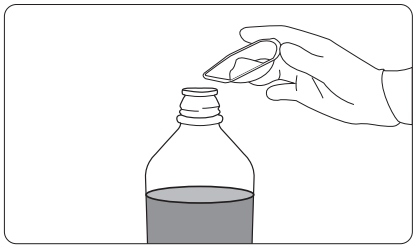
Media Supplement



01

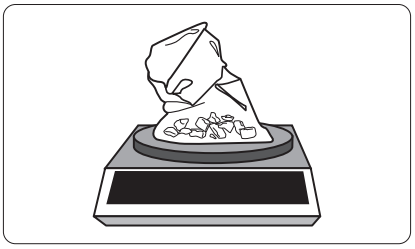
Aseptically weigh the appropriate amount of *Salmonella* Enrichment Supplement.

Enrichment Procedure



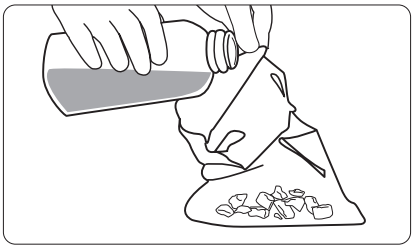
02

Aseptically add the *Salmonella* Enrichment Supplement to the appropriate amount of autoclaved, prepared *Salmonella* Enrichment Base.



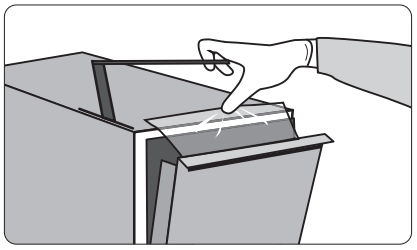
03

Prepare dilution of food product. Weigh or pipette food product into a sterile container such as a homogenizer bag or container.



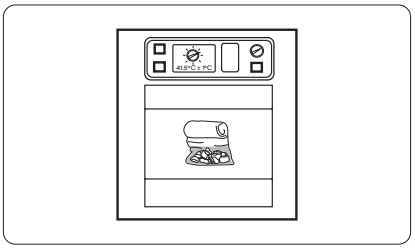
04

Add appropriate quantity of pre-warmed. *Salmonella* Enrichment Base plus *Salmonella* Enrichment Supplement to the sample bag or container.



05

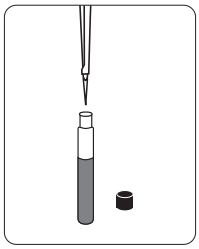
Blend or homogenize sample per current procedure.



06

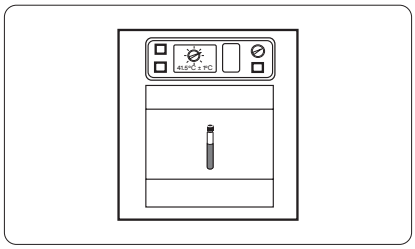
Incubate the enriched samples at 41.5°±1°C for 18–24 hours. For low microbial background samples (<10^4 CFU/g), move to step 13a after first performing steps 9–12.

Hydration Procedure



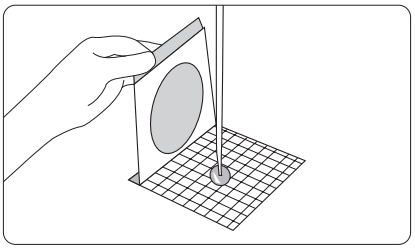
07

For high microbial background samples only (>10^4 CFU/g). After enrichment incubation, transfer 0.1 mL into 10 mL Rappaport-Vassiliadis (R-V) R10.



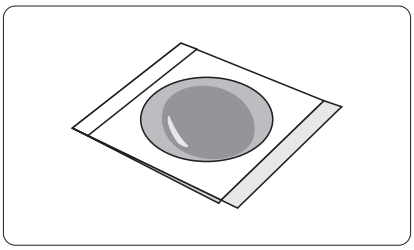
08

Incubate the R-V R10 at 41.5°±1°C for 8–24 hours. Move to step 13b after first performing steps 9–12.



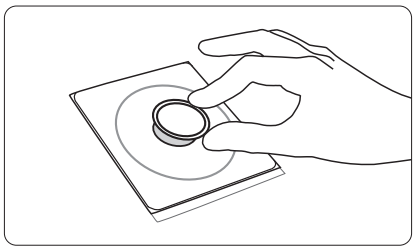
09

Place Petrifilm *Salmonella* Express Plate on a flat, level surface. With the pipette perpendicular to the plate, place 2.0 mL ± 0.1 mL of sterile diluent onto the center of the bottom film.



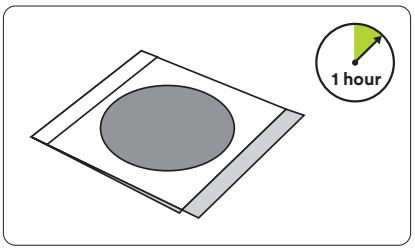
10

Gently roll down the top film onto the diluent to prevent trapping air bubbles.



11

Place the Petrifilm Flat Spreader on the center of the plate. Press gently on the center of the spreader to distribute the diluent evenly. Spread the diluent over the entire Petrifilm *Salmonella* Express Plate growth area before the gel is formed. Do not slide the spreader across the film.

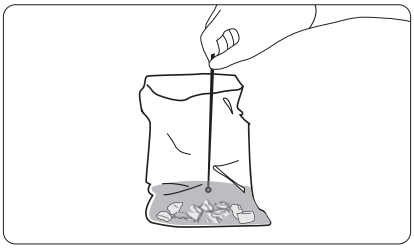


12

Place Petrifilm *Salmonella* Express Plate on a flat surface for at least 1 hour at room temperature (20–25°C), protected from light, to allow the gel to form.

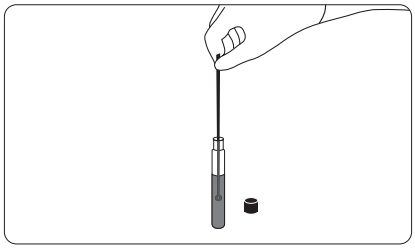
Note: Hydrated plates can be stored at room temperature (20–25°C), protected from light, for up to 8 hours before use. If hydrated plates will not be used within 8 hours, refer to Product Instructions for storage conditions.

Plate Inoculation, Incubation and Interpretation



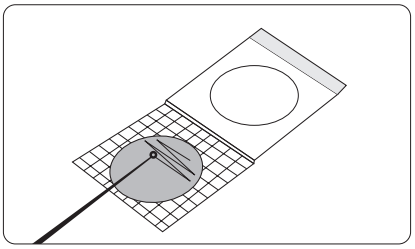
13a

For low microbial background samples, use a sterile 10µL loop to withdraw a full loop of sample. Use a smooth loop (one that does not have jagged edges and is not distorted) to prevent the gel surface from breaking.



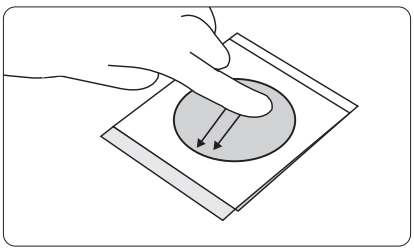
13b

For high microbial background samples, use a sterile 10µL loop to withdraw a full loop of sample for streaking the plate. Use a smooth loop (one that does not have jagged edges and is not distorted) to prevent the gel surface from breaking.



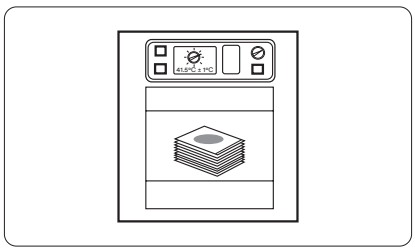
14

Perform a single streak, top of plate to bottom of plate, to obtain isolated colonies.



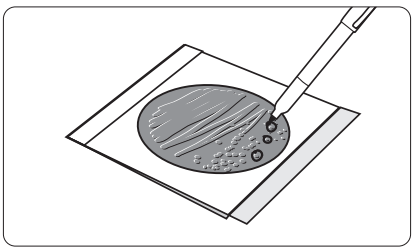
15

Roll down the top film to close the Petrifilm *Salmonella* Express Plate. Using a gloved hand (while practicing good laboratory practices to avoid cross contamination and/or direct contact with the plate), gently apply a sweeping motion with even pressure onto the top film to remove any air bubbles in the inoculation area.



16

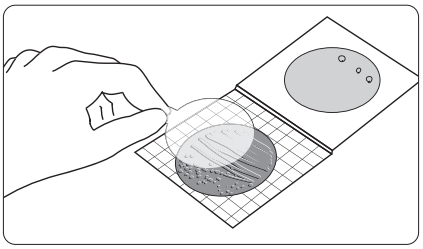
Incubate plates at 41.5°±1°C for 24±2 hours in a horizontal position with the colored side up in stacks of no more than 20 plates.



17

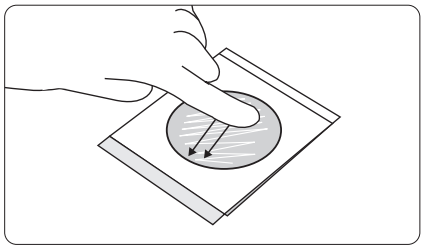
On the Petrifilm *Salmonella* Express Plate top film, circle a minimum of five isolated presumptive positive *Salmonella* colonies (if present), using a permanent, ultra fine tip marker. Biochemically confirm all *Salmonella* presumptive positive results using the Petrifilm *Salmonella* Express Confirmation Disk.

Biochemical Confirmation



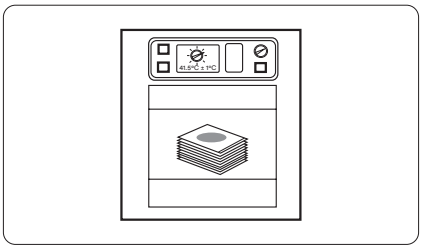
18

Remove an individually packaged Petrifilm *Salmonella* Express Confirmation Disk from its pouch and allow it to come to room temperature. Peel the package to expose the disk's tab, grasp the tab, and remove the disk. Lift the top film (with the already circled presumptive *Salmonella* colonies) of the Petrifilm *Salmonella* Express Plate and insert the disk by rolling it onto the gel to avoid entrapping air bubbles. Close the plate.



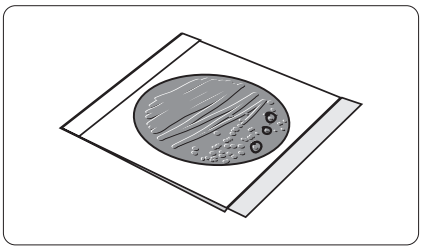
19

Using a gloved hand, gently apply a sweeping motion with even pressure onto the top film to remove any air bubbles in the inoculation area and assure good contact between the gel and the Petrifilm *Salmonella* Express Confirmation Disk.



20

Incubate the Petrifilm *Salmonella* Express System (plate and disk) at 41.5°±1°C for 4–5 hours.



21

Remove the Petrifilm *Salmonella* Express System from the incubator and proceed with reading the results. Look only at the circled colonies.

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**

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.

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®

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

FS00587_0823