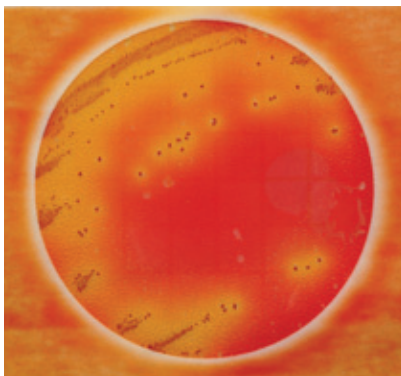


3M Food Safety

3M™ Petrifilm™ *Salmonella* Express System



Technician Productivity Maximized



Interpretation Guide

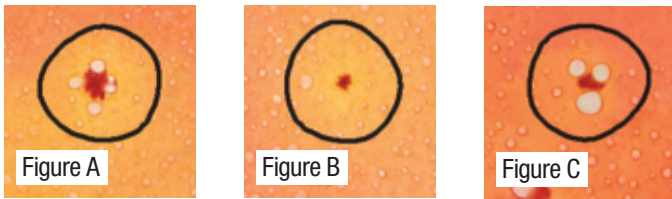
3M™ Petrifilm™ *Salmonella* Express (SALX) System is a qualitative pathogen test used for the rapid detection and biochemical confirmation of *Salmonella* in enriched foods and food process environmental samples. 3M Petrifilm *Salmonella* Express System consists of:

- 3M™ *Salmonella* Enrichment Base and 3M™ *Salmonella* Enrichment Supplement — a unique medium for recovery and growth of *Salmonella* species
- 3M™ 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
- 3M™ Petrifilm™ *Salmonella* Express Confirmation Disk — a biochemical substrate that facilitates the biochemical confirmation of *Salmonella* organisms



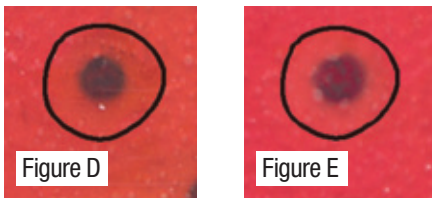
Colony Examples

Presumptive Positive Colonies on Plate



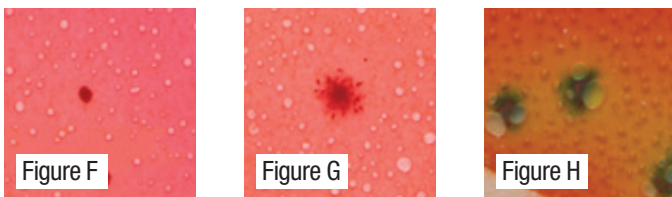
Observation:
 Figure A: Red colony with yellow zone and associated gas bubble.
 Figure B: Red colony with yellow zone.
 Figure C: Red colony and associated gas bubble, no yellow zone.

Confirmed *Salmonella* Colonies with Confirmation Disk



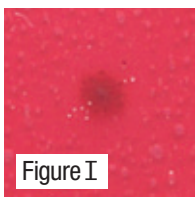
Observation:
 Figure D: Dark blue/black colony with blue precipitate.
 Figure E: Dark blue/black colony with dark red center and blue precipitate.

Non-*Salmonella* Colonies on Plate



Observation:
 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.

Non-*Salmonella* Colony with Confirmation Disk

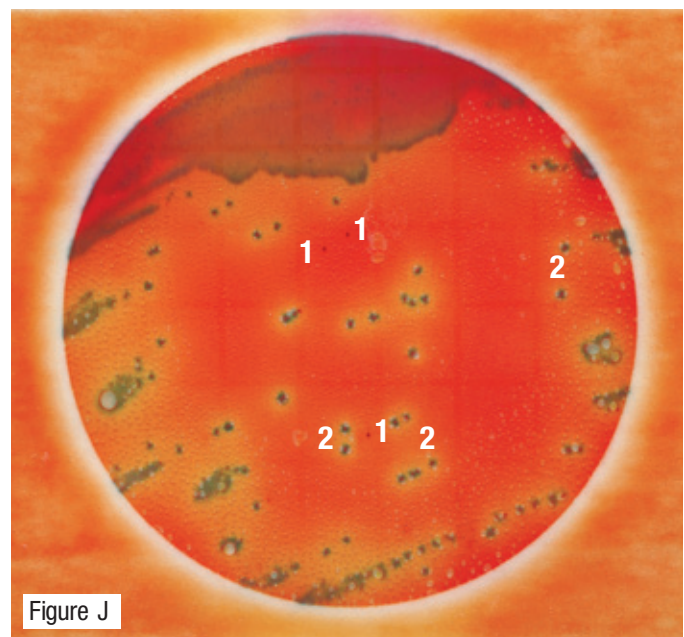


Observation:
 Figure I: Colony remains same red color without blue precipitate after adding confirmation disk.

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 +

3M Petrifilm SALX Plate with No Presumptive Positives



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

User's Responsibilities: 3M Petrifilm Plate performance has not been evaluated with all combinations of microbial flora, incubation conditions and food matrixes. 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.

Plate Example 1

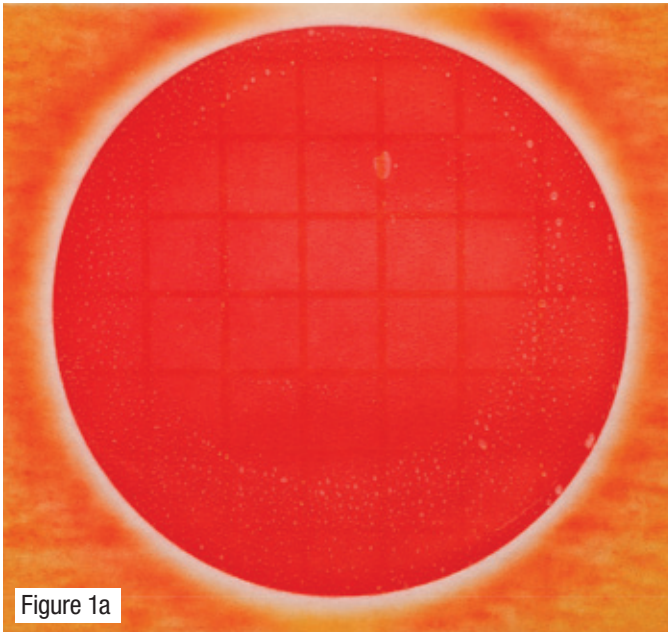


Figure 1a

3M Petrifilm SALX Plate

Observation: Negative Control Plate hydrated with 2mL diluent.

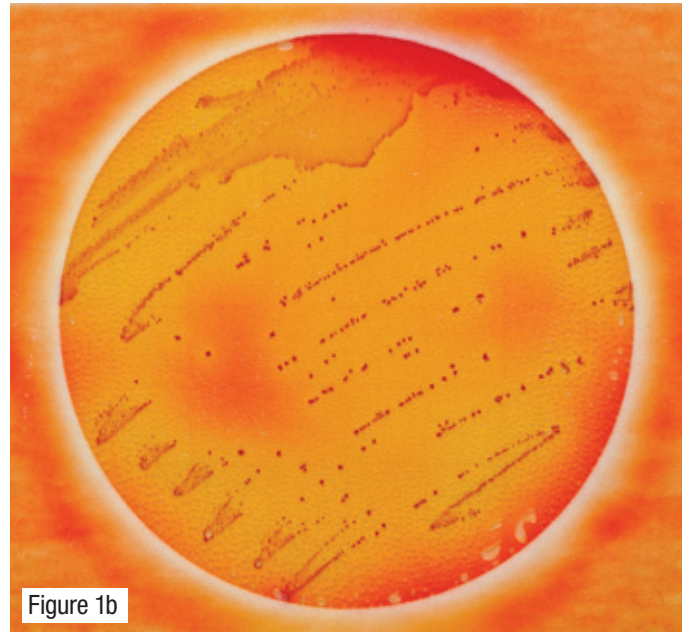


Figure 1b

3M Petrifilm SALX Plate with only Presumptive Positive Colonies

Observation: Note isolated red colonies with a yellow zone.

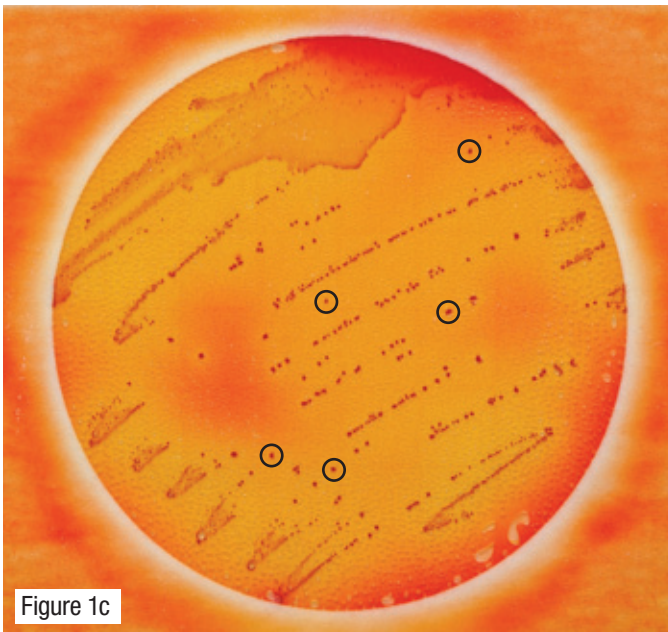


Figure 1c

3M Petrifilm SALX Plate with Presumptive Positive Colonies Circled

Observation: The five (5) most predominate isolated presumptive positive colony morphologies (red with yellow zone) have been circled on the plate's top film.

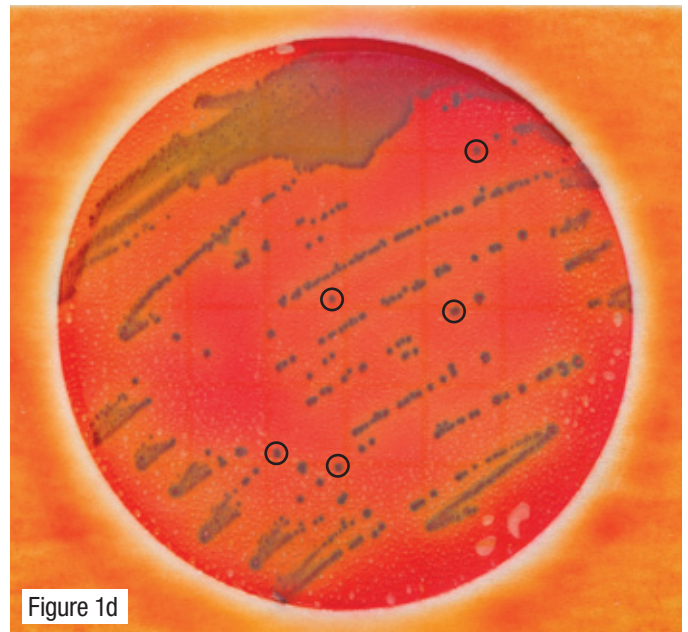


Figure 1d

3M Petrifilm SALX Plate with 3M Petrifilm SALX Confirmation Disk

Observation: Circled presumptive positive colonies are blue to dark blue/black with a blue precipitate after the addition and incubation of the 3M Petrifilm SALX Confirmation Disk. These circled colonies are biochemically confirmed positive for *Salmonella* species.

User's Responsibilities: 3M Petrifilm Plate performance has not been evaluated with all combinations of microbial flora, incubation conditions and food matrixes. 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.

Plate Example 2

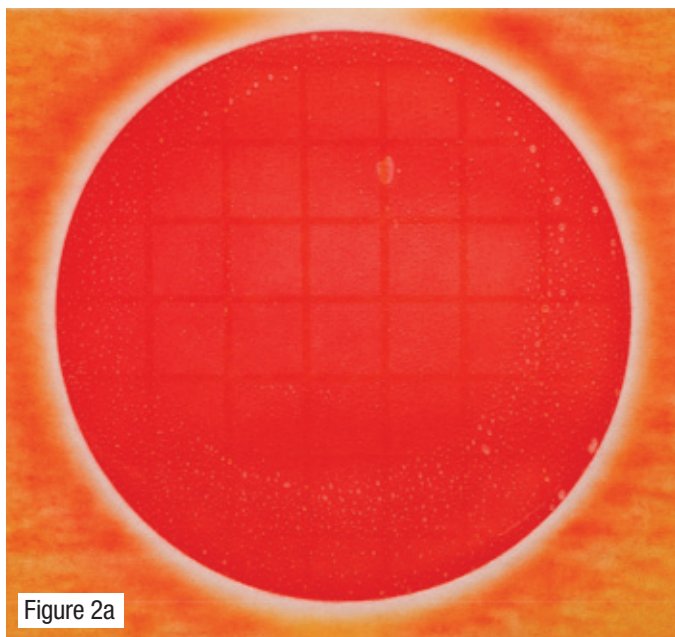


Figure 2a

3M Petrifilm SALX Plate

Observation: Negative Control Plate hydrated with 2mL diluent.

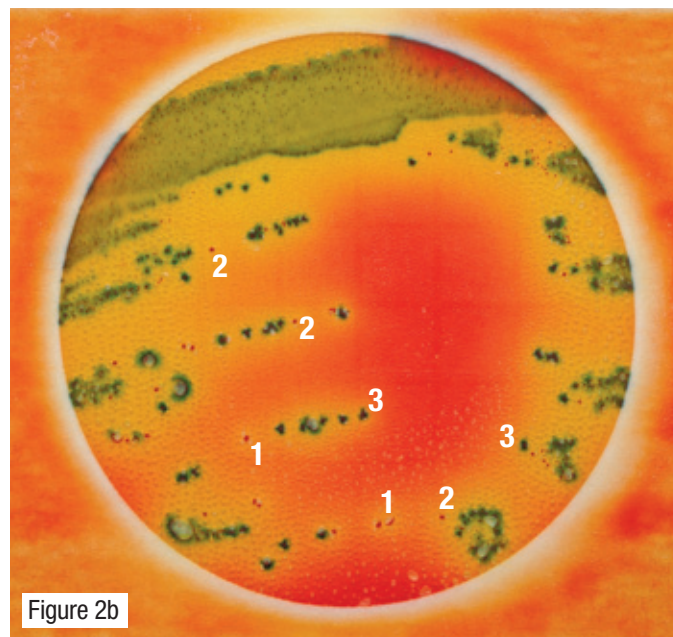


Figure 2b

3M Petrifilm SALX Plate with mixed colony morphologies

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

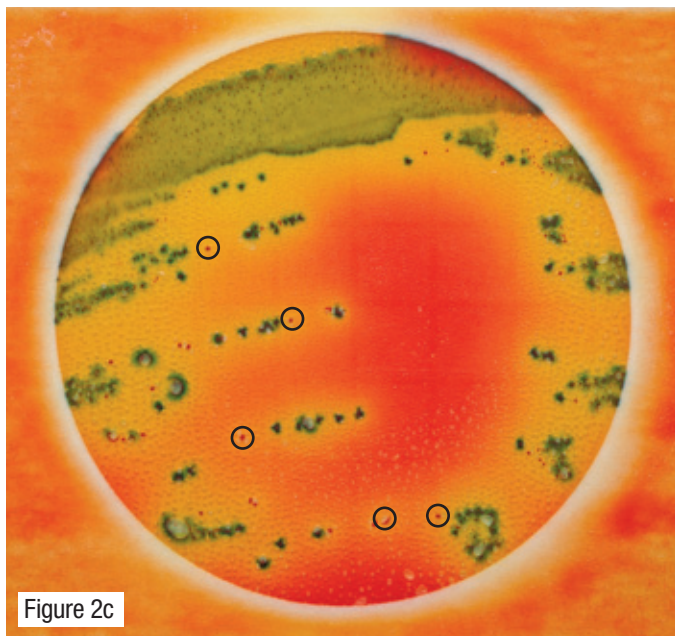


Figure 2c

3M Petrifilm SALX Plate with Presumptive Positive Colonies Circled

Observation: The five (5) most predominant isolated presumptive positive colony morphologies (red with yellow zone and associated gas bubble; red with yellow zone and no associated gas bubble) have been circled on the plate's top film.

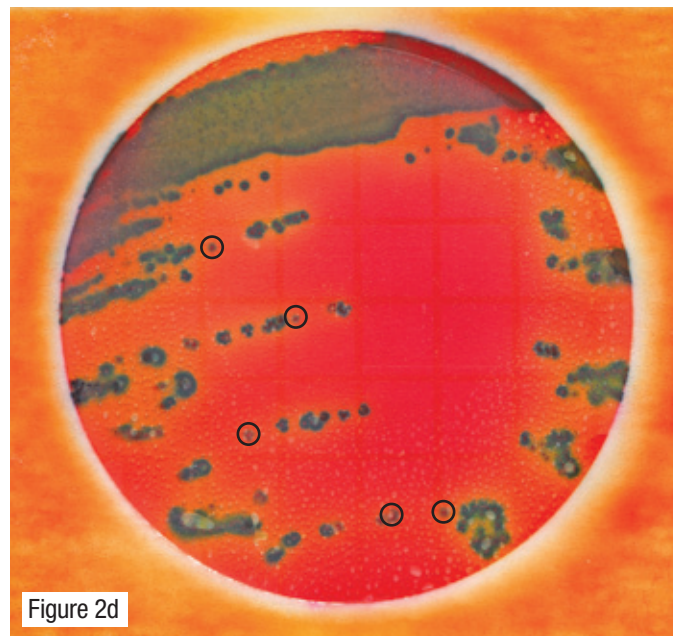


Figure 2d

3M Petrifilm SALX Plate with 3M Petrifilm SALX Confirmation Disk

Observation: Circled presumptive positive colonies are blue to dark blue/black with blue precipitate after the addition and incubation of the 3M Petrifilm SALX Confirmation Disk. These circled colonies are biochemically confirmed positive for *Salmonella* species.

User's Responsibilities: 3M Petrifilm Plate performance has not been evaluated with all combinations of microbial flora, incubation conditions and food matrixes. 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.

Plate Example 3

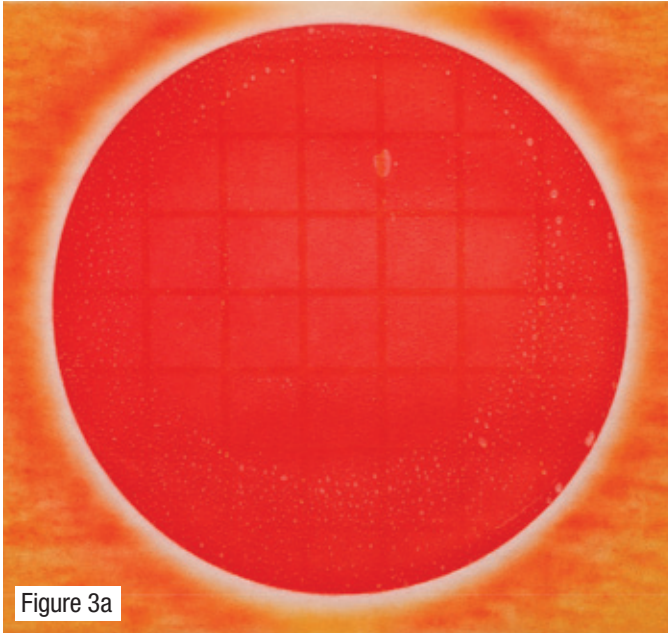


Figure 3a

3M Petrifilm SALX Plate

Observation: Negative Control Plate hydrated with 2mL diluent.

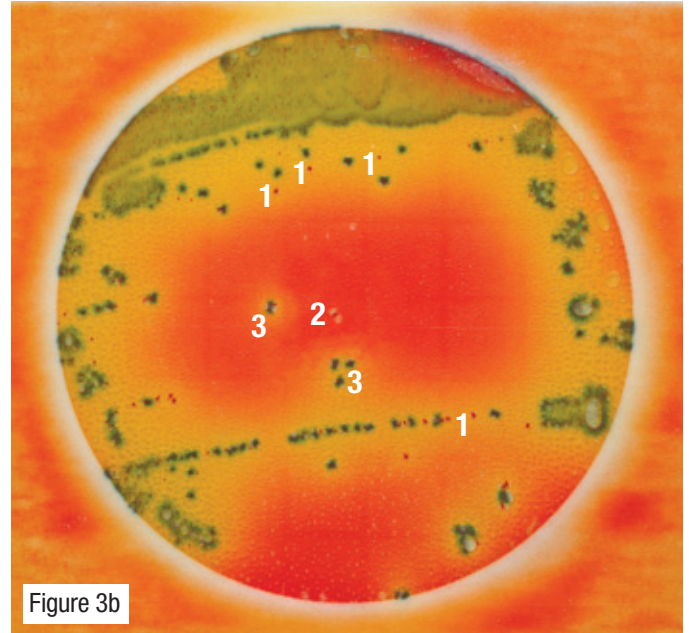


Figure 3b

3M Petrifilm SALX Plate with Mixed Colony Morphologies

Observation: (1) Isolated red colonies with yellow zone. (2) Isolated red colony with gas bubble. (3) Background flora of blue, blue-green colonies with associated gas bubble.

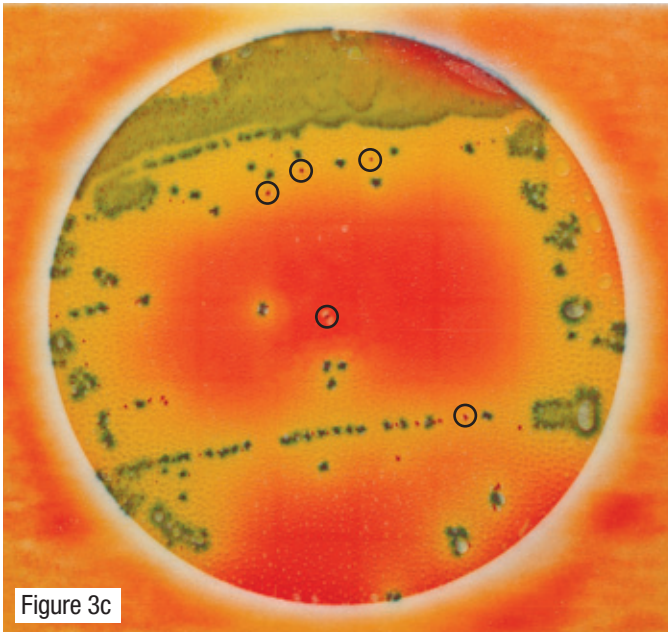


Figure 3c

3M Petrifilm SALX Plate with Presumptive Positive Colonies

Observation: The five (5) most predominate isolated presumptive positive colony morphologies (red with yellow zone and red with associated gas bubble) have been circled on the plate's top film.

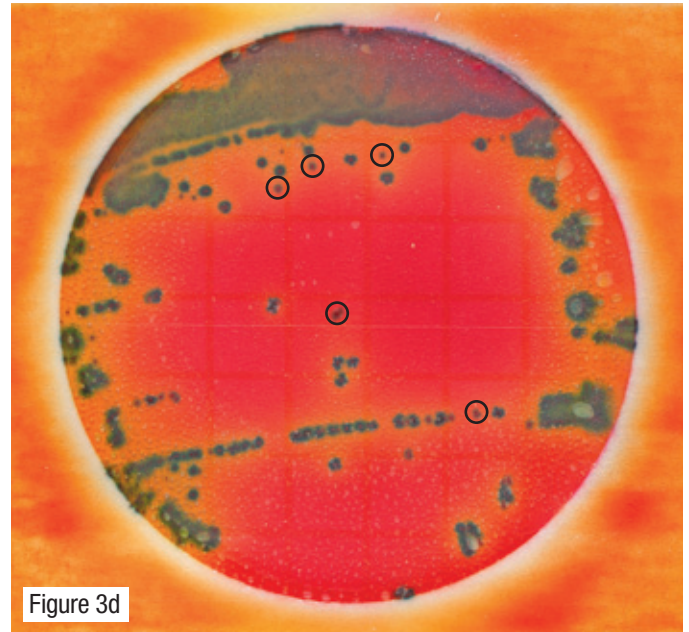


Figure 3d

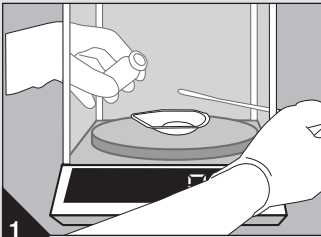
3M Petrifilm SALX Plate with 3M Petrifilm SALX Confirmation Disk

Observation: Circled presumptive positive colonies are blue to dark blue/black with a blue precipitate after the addition and incubation of the 3M Petrifilm SALX Confirmation Disk. These circled colonies are biochemically confirmed positive for *Salmonella* species.

User's Responsibilities: 3M Petrifilm Plate performance has not been evaluated with all combinations of microbial flora, incubation conditions and food matrixes. 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.

Reminders for Use: 3M™ Petrifilm™ *Salmonella* Express System

Media Supplement

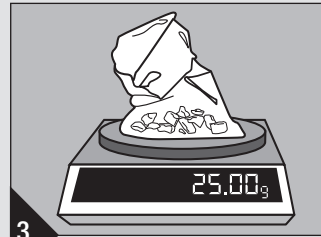


1 Aseptically weigh the appropriate amount of 3M *Salmonella* Enrichment Supplement.

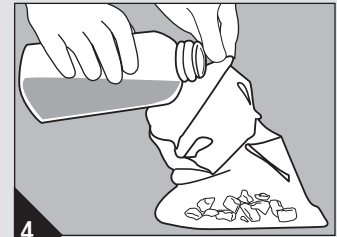
Enrichment Procedure



2 Aseptically add the 3M *Salmonella* Enrichment Supplement to the appropriate amount of autoclaved, prepared 3M *Salmonella* Enrichment Base.

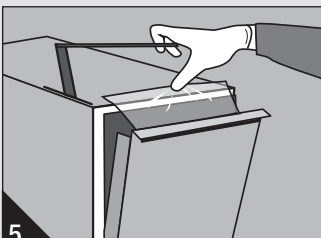


3 Prepare dilution of food product. Weigh or pipette food product into a sterile container such as a homogenizer bag or container.

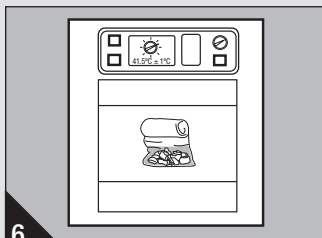


4 Add appropriate quantity of the combined 3M *Salmonella* Enrichment Base plus 3M *Salmonella* Enrichment Supplement to the sample bag or container.

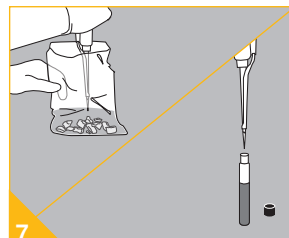
Enrichment Procedure cont.



5 Blend or homogenize sample per current procedure.



6 Incubate the enriched samples at $41.5^{\circ}\pm 1^{\circ}\text{C}$ for 18–24 hours. **For low microbial background samples ($\leq 10^4$ CFU/g), move to step 13a after first performing steps 9–12.**

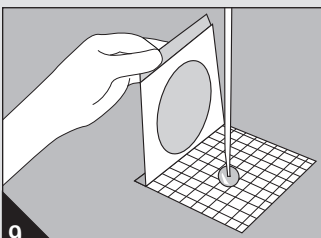


7 **For high microbial background samples ($>10^4$ CFU/g).** After enrichment incubation, transfer 0.1mL into 10mL R-V R10.



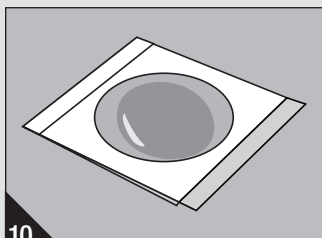
8 Incubate the R-V R10 at $41.5^{\circ}\pm 1^{\circ}\text{C}$ for 8–24 hours. **Move to step 13b after first performing steps 9–12.**

Hydration Procedure

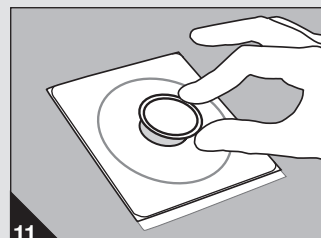


9 **Note: Hydrated plates can be stored at room temperature (20–25°C), protected from light, for up to 8 hours before use. If hydrated plates will not be used within 8 hours, refer to Instructions for Use for storage conditions.**

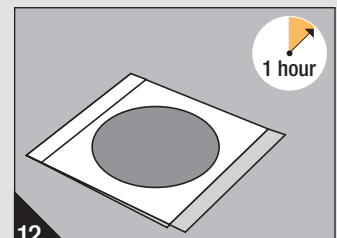
Place 3M Petrifilm SALX Plate on a flat, level surface. With the pipette **perpendicular** to the plate, place 2.0mL of sterile diluent onto the center of the bottom film.



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



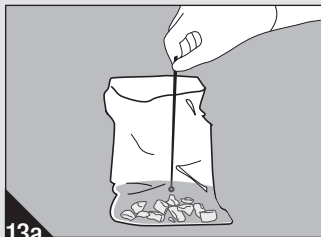
11 Place the 3M Petrifilm Flat Spreader on the center of the plate. Press gently on the center of the spreader to distribute the diluent evenly. Spread the diluent over the entire 3M Petrifilm SALX Plate growth area before the gel is formed. **Do not slide the spreader across the film.**



12 Place 3M Petrifilm SALX 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.

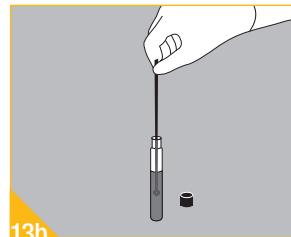
Reminders for Use: 3M™ Petrifilm™ *Salmonella* Express System

Plate Inoculation, Incubation and Interpretation



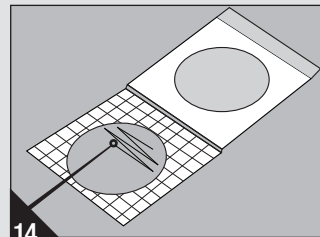
13a

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.



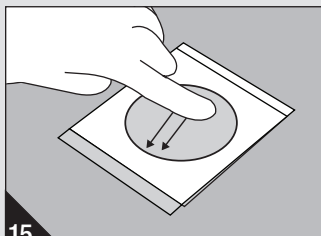
14

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

Example
10µL Loop (3mm diameter)

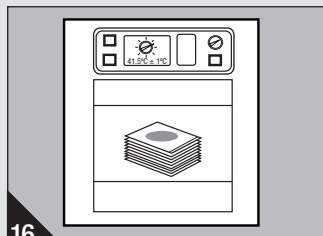


Plate Inoculation, Incubation and Interpretation cont.



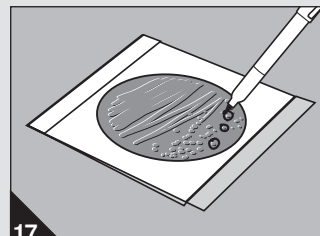
15

Roll down the top film to close the 3M Petrifilm SALX 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

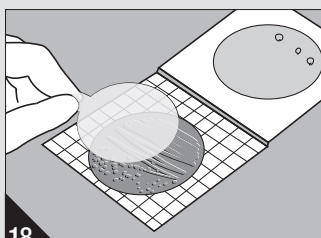
Incubate plates at $41.5^{\circ}\pm 1^{\circ}\text{C}$ for 24 ± 2 hours in a horizontal position with the colored side up in stacks of no more than 20 plates.



17

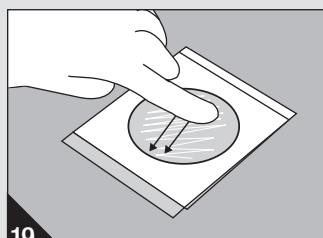
On the 3M Petrifilm SALX Plate top film, circle isolated presumptive positive *Salmonella* colonies using a permanent, ultra fine tip marker. Biochemically confirm all *Salmonella* presumptive positive results using the 3M Petrifilm SALX Confirmation Disk.

Biochemical Confirmation



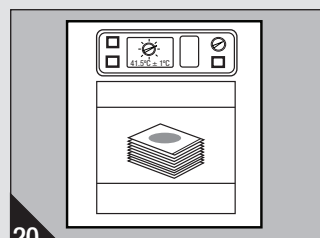
18

Remove an individually packaged 3M Petrifilm SALX 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 3M Petrifilm SALX Plate and insert the disk by rolling it onto the gel to avoid entrapping air bubbles. Close the plate.



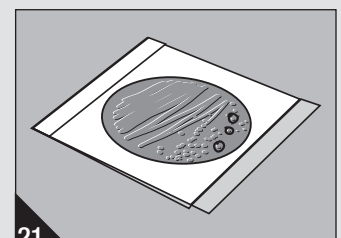
19

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 3M Petrifilm SALX Confirmation Disk.



20

Incubate the 3M Petrifilm *Salmonella* Express System (plate and disk) at $41.5^{\circ}\pm 1^{\circ}\text{C}$ for 4–5 hours.



21

Remove the 3M Petrifilm *Salmonella* Express System from the incubator and proceed with reading the results. **Look only at the circled colonies.**



3M Petrifilm *Salmonella* Express (SALX) Plate and Confirmation Disk



3M *Salmonella* Enrichment Base and Supplement



3M Petrifilm Flat Spreader



3M Petrifilm *Salmonella* Express System and 3M Media and Sample Handling Products

Order Information

▶ 3M™ Petrifilm™ *Salmonella* Express System

Product	Catalog Number	Quantity
3M™ Petrifilm™ <i>Salmonella</i> Express (SALX) Plate	6536	50 plates/box
	6537	200 plates/case
3M™ Petrifilm™ <i>Salmonella</i> Express (SALX) Confirmation Disk	6538	5 disks/box
	6539	25 disks/case
3M™ <i>Salmonella</i> Enrichment Base	SEB500	500g/bottle
	SEB025	2.5kg/bottle
3M™ <i>Salmonella</i> Enrichment Supplement	SESUP001	1g/vial
3M™ Petrifilm™ Flat Spreader	6425	2 spreaders/box

▶ 3M™ Media and Sample Handling Products

Product	Catalog Number	Quantity
3M™ Rappaport-Vassiliadis R10 (R-V R10) Broth	BP0288500	500g/bottle
3M™ Sample Bags	BP701	1,000/box
3M™ Homogenizer Bags	6469	200/box
3M™ Sponge-Stick, w/10mL D/E Broth	SSL10DE	100/case
3M™ Hydrated Sponge, w/10mL D/E Neutralizing Buffer, 2 gloves	HS10DE2G	100/case
3M™ Electronic Pipettor II, 5mL	6503	1 each
3M™ Pipettor Tips, 5mL, wire bore, racked, pre-sterilized	6489	500/case

To order, call 3M Food Safety Customer Service at 1-800-328-1671 or contact your local 3M representative.

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 www.3M.com/foodsafety.



Food Safety
3M Center
Building 275-5W-05
St. Paul, MN 55144-1000
USA
1-800-328-6553
www.3M.com/foodsafety

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