

3M<sup>SM</sup> Health Care Academy

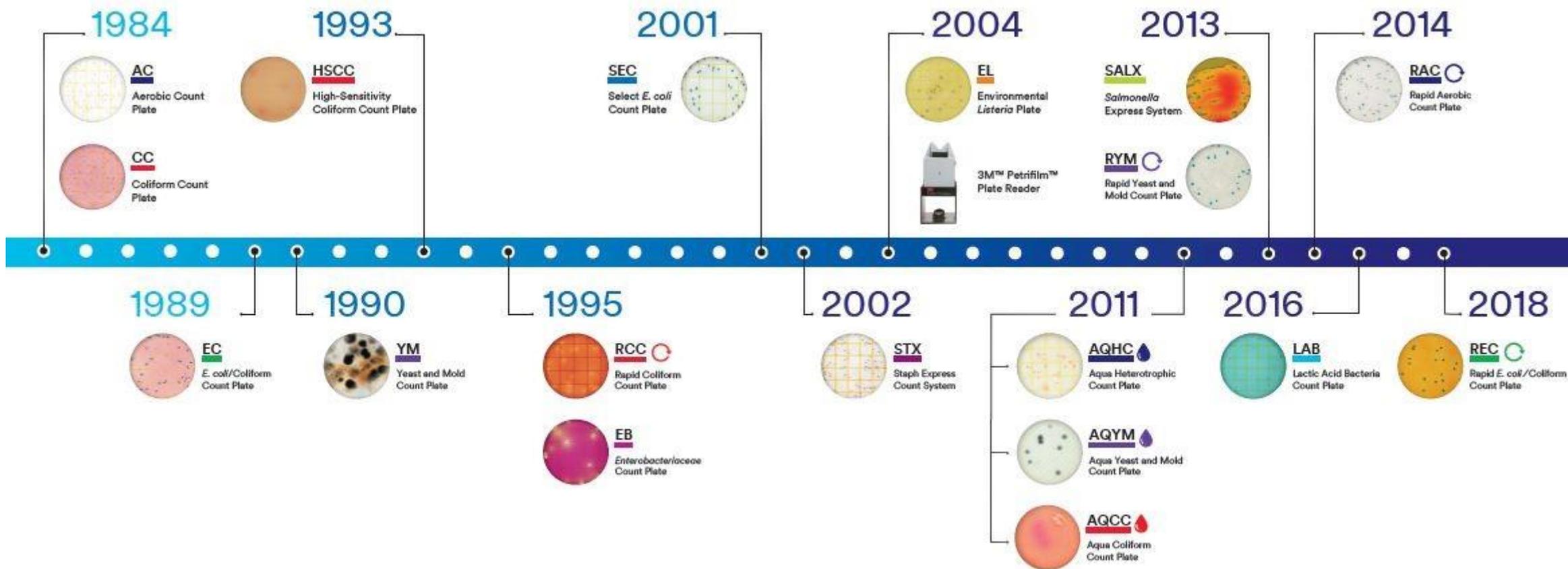
# Présentation Générale des tests 3M<sup>TM</sup> Petrifilm<sup>TM</sup>



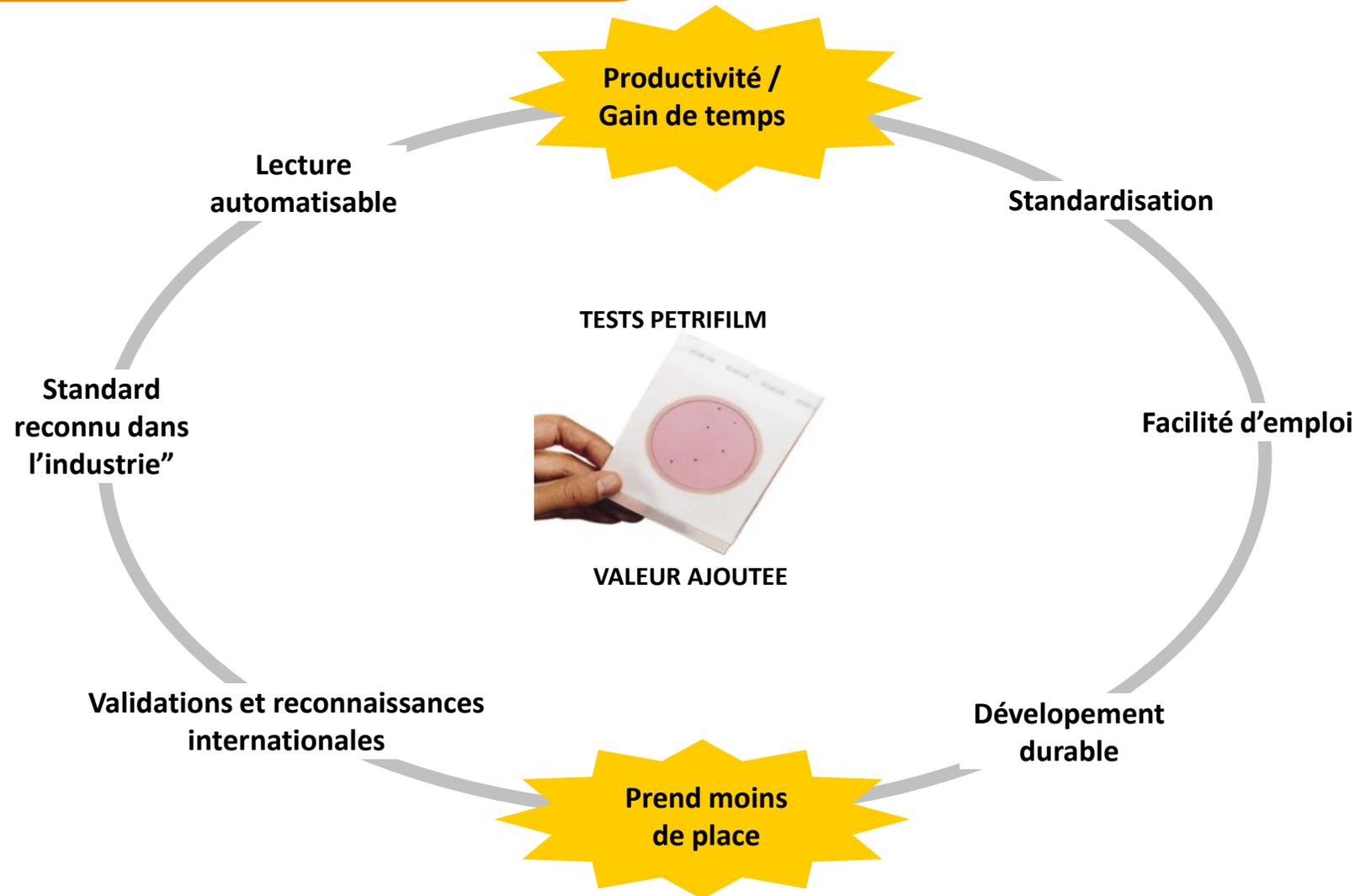
Jean-François David, Conseiller Scientifique

# Tests 3M Petrifilm - Introduction

## Historique.



## 3M Petrifilm Plate – Valeur ajoutée



- De nombreux paramètres constituent la valeur ajoutée des tests 3M Petrifilm
- Les utilisateurs adoptent les tests 3M Petrifilm pour un ou plusieurs des avantages listés ci-dessus.
- Cependant, tous les composants doivent être mentionnés lors du processus de vente.



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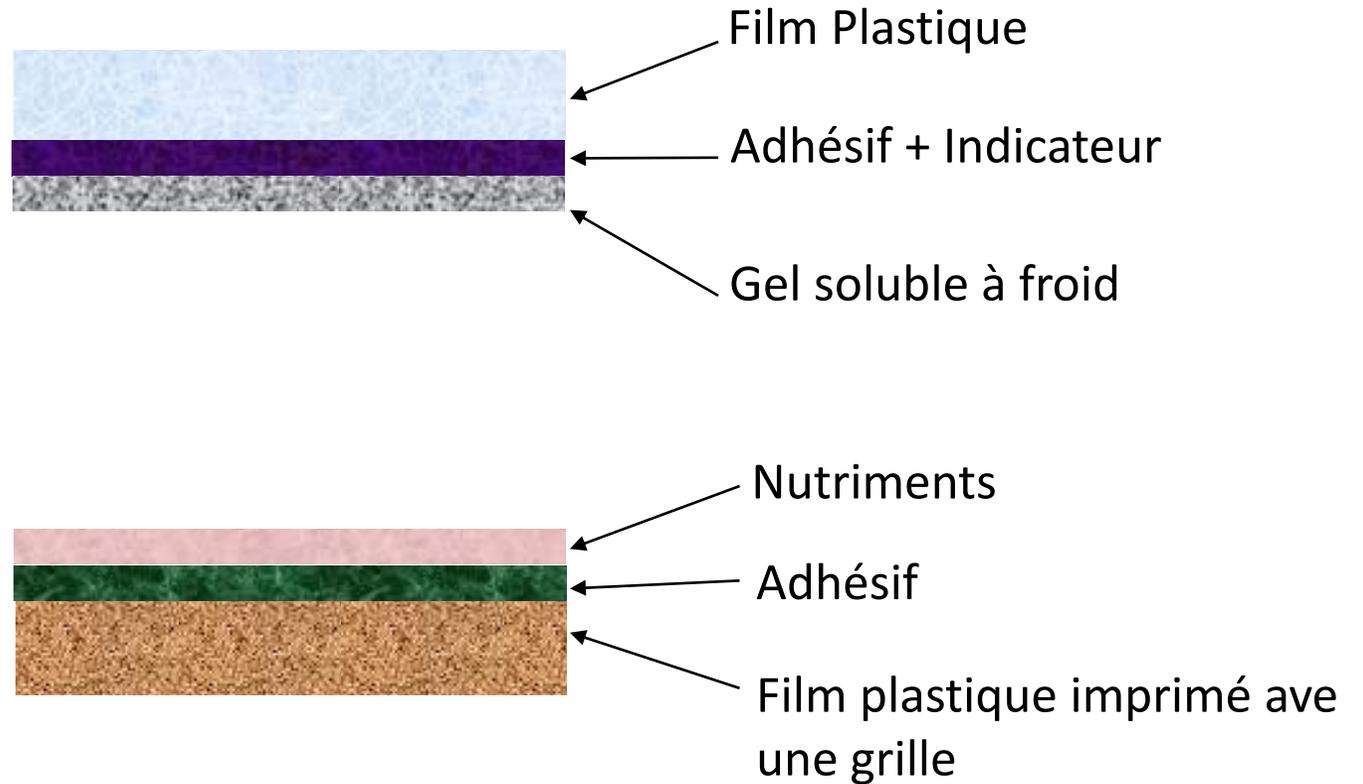
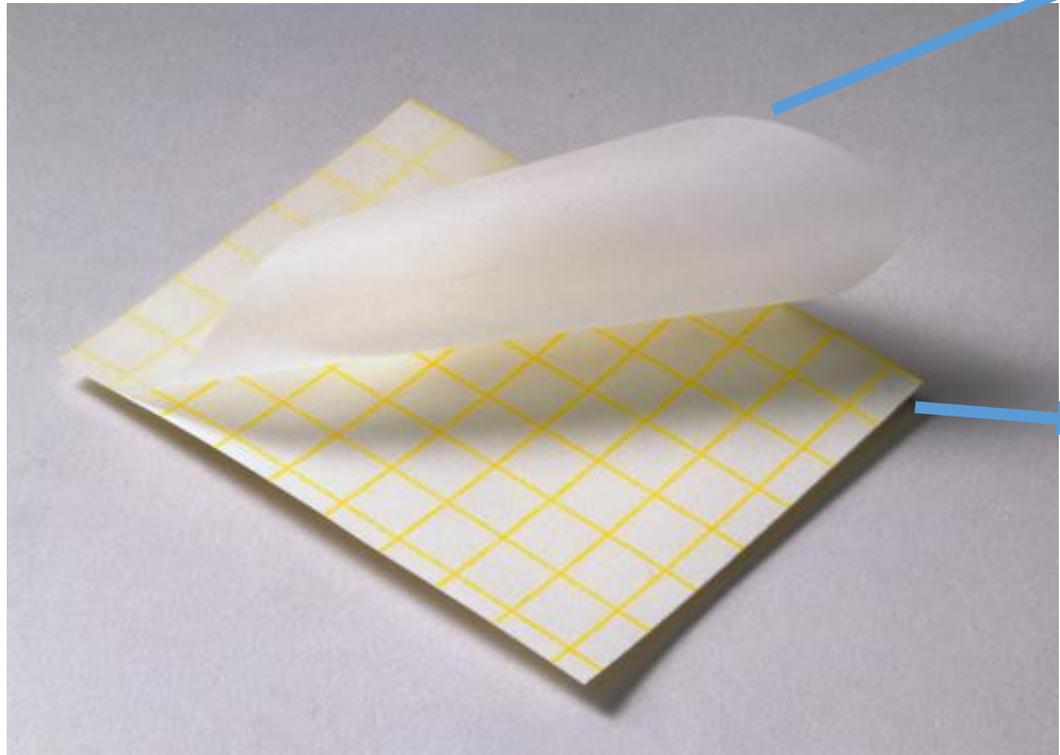
# Tests 3M™ Petrifilm™ Caractéristiques générales



# Tests 3M™ Petrifilm™ - Caractéristiques

Information  
produit

Enduction multicouches.



*Note : tous les tests Petrifilm sont basés sur le même concept*

# Tests 3M™ Petrifilm™ - Stockage

Information  
produit



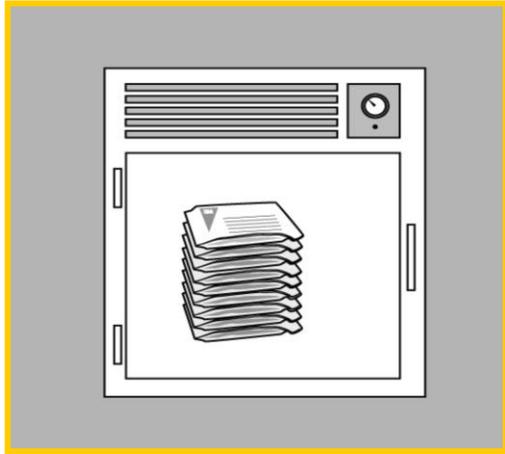
## Durée de vie :

18 mois à compter de la date de fabrication, pour tous les tests 3M Petrifilm

Date de péremption indiquée sur tous les emballages et sur chaque tests 3M Petrifilm

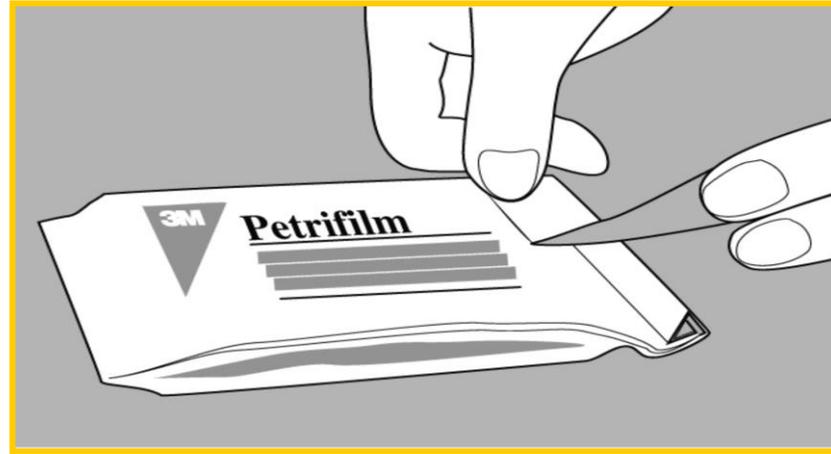
# Tests 3M™ Petrifilm™ - Stockage

Information  
produit



Mettre au réfrigérateur les poches jamais ouvertes, à une température  $< 8^{\circ}\text{C}$  ( $< 46^{\circ}\text{F}$ ).

Utiliser avant la date d'expiration indiquée sur la poche.



Pour refermer les poches, replier l'extrémité et fermer à l'aide d'un ruban adhésif.



Garder les poches entamées à une température  $< 25^{\circ}\text{C}$ .  
Et HR  $\leq 50\%$ .  
**Ne pas les placer au réfrigérateur.**  
**Utiliser dans le mois qui suit l'ouverture de la poche.**



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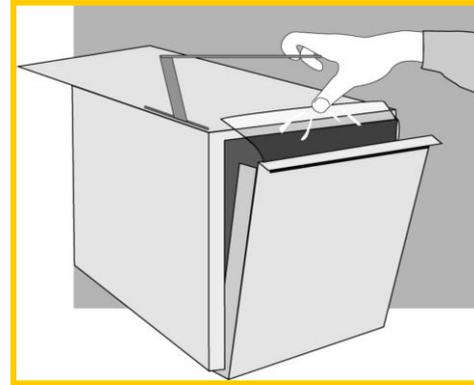
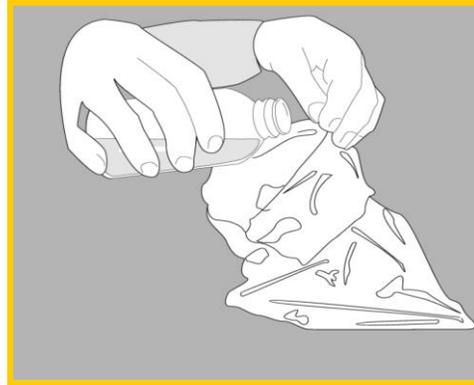
# Tests 3M™ Petrifilm™ Mise en œuvre



# Tests 3M™ Petrifilm™ - Mise en œuvre

Analyses  
produits

## Préparation des échantillons



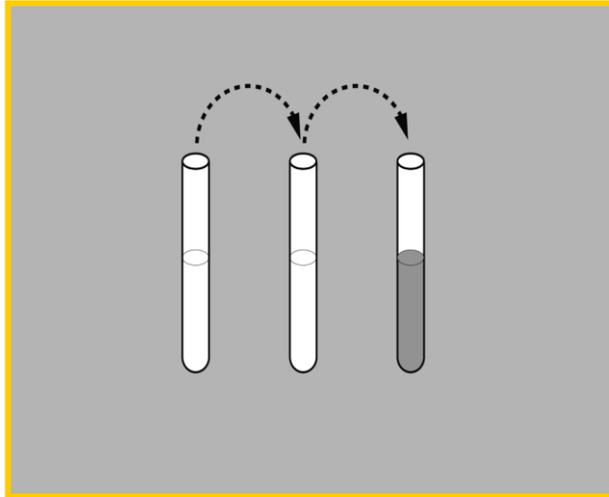
Peser les échantillons, ajouter du diluant, broyer ou homogénéiser

*Note : Selon les différents tests 3M™ Petrifilm™, ajuster le pH des échantillons dilués entre 6.6 et 7.2 ou entre 6.5 et 7.5 avec NaOH 1N ou HCl 1N, ou utiliser un diluant tamponné comme l'eau peptonée tamponnée par exemple.*

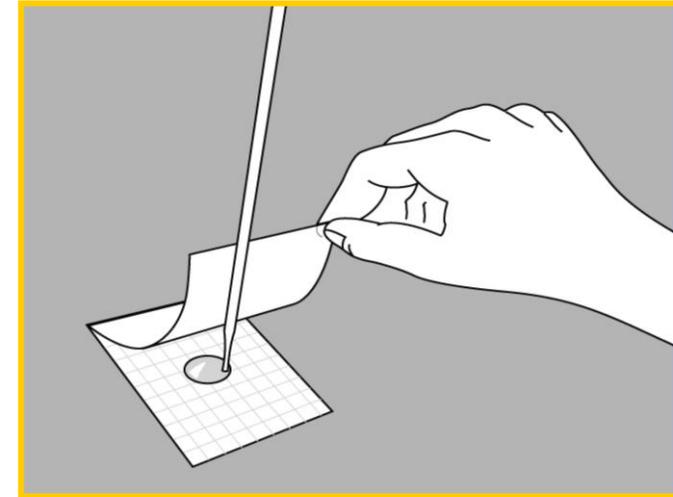
# Tests 3M™ Petrifilm™ - Mise en œuvre

Analyses  
produits

## Dilution et inoculation



Pratiquer des dilutions décimales si nécessaire et en fonction des besoins.



Placer 1 ml de l'échantillon dilué au centre du film inférieur.

(5 ml pour le test Haute-Sensibilité coliformes)

# Tests 3M™ Petrifilm™ - Mise en œuvre

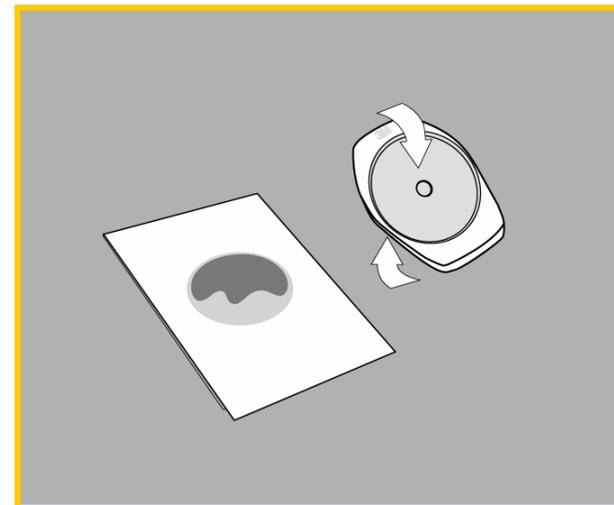
Analyses  
produits

## Étalement des échantillons



Test Flore Totale

**Utiliser la face concave au contact  
du test Petrifilm**



Tests Enterobacteriaceae, E. coli et coliformes,  
Select E. coli, Coliformes

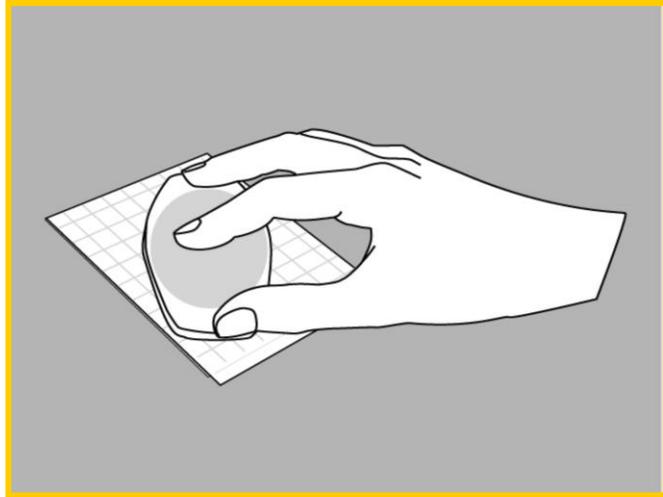
**Utiliser la face plate au contact du test Petrifilm**

*Note : Pour les tests Haute-Sensibilité coliformes, les tests levures et moisissures, la gamme rapide et Staph Express il existe des diffuseurs spécifiques.*

# Tests 3M™ Petrifilm™ - Mise en œuvre

Analyses  
produits

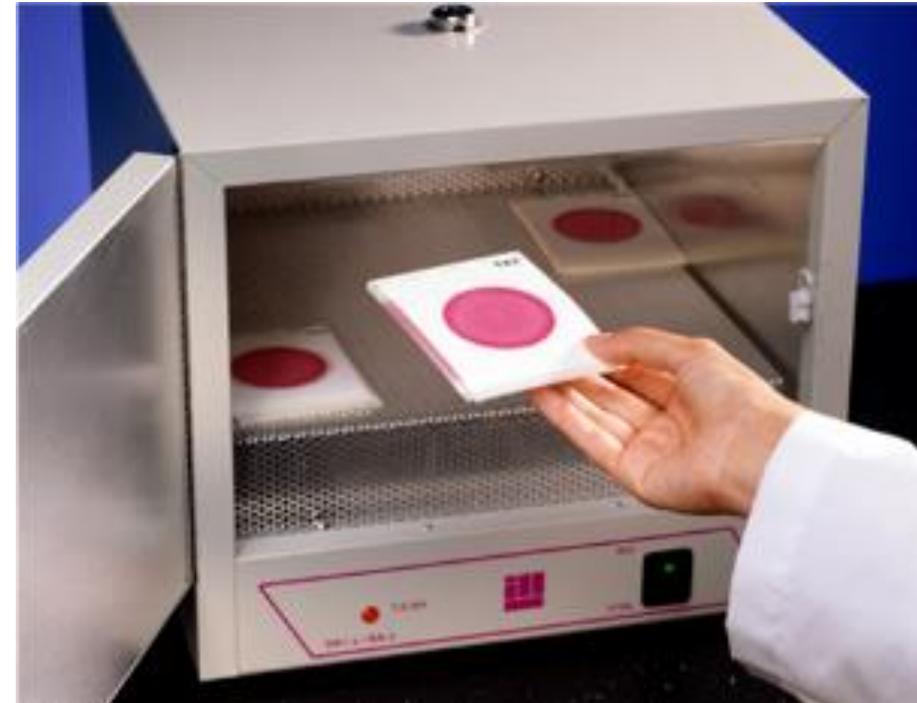
## Étalement des échantillons



Étaler l'échantillon en exerçant une légère pression sur le diffuseur.

Ne pas tourner ou faire glisser le diffuseur.

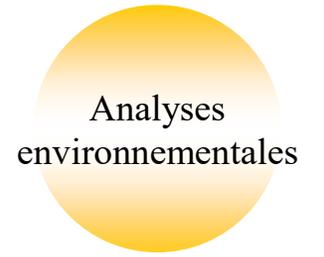
## Incubation



Incuber les tests 3M™ Petrifilm™ à l'horizontale, le film supérieur vers le haut, sans empiler plus de 20 unités (10 unités pour le test Haute-Sensibilité coliformes).

# Tests 3M™ Petrifilm™ - Mise en œuvre

## Analyses environnementales

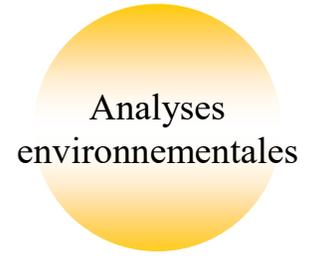


- Préparation
- Méthode de gélose contact
- Écouvillonnage

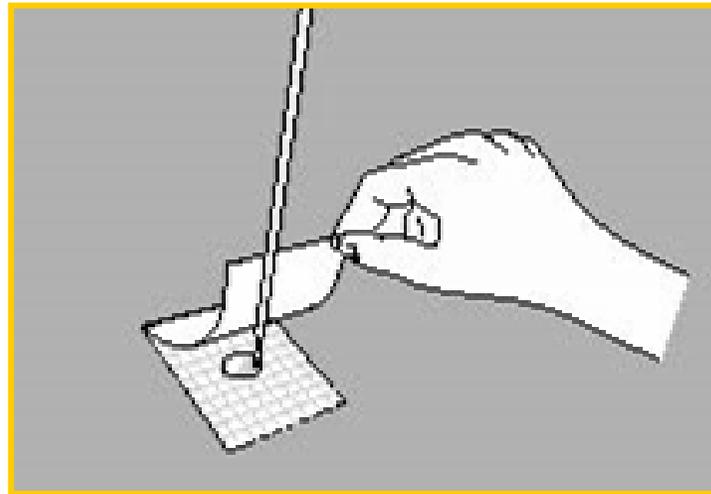


# Tests 3M™ Petrifilm™ - Mise en œuvre

## Préparation



Réhydratation préalable du test 3M™ Petrifilm™ pour la méthode de gélose contact



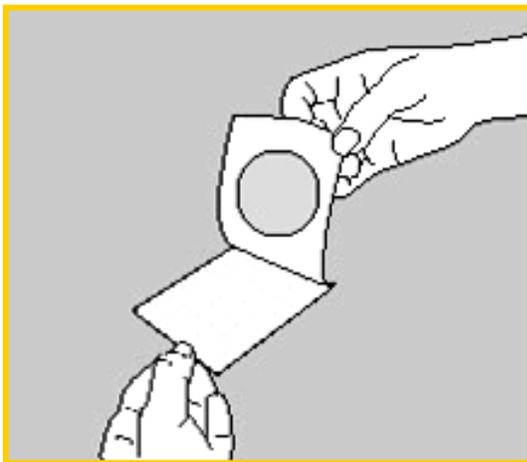
Selon les instructions données dans les fiches techniques :

- Réhydrater les tests 3M™ Petrifilm™ avec 1ml de diluant approprié.
- Placer les tests 3M™ Petrifilm™ à température ambiante pour permettre au gel de se solidifier.

# Tests 3M™ Petrifilm™ - Mise en œuvre

Analyses  
environnementales

## Méthode de gélose contact

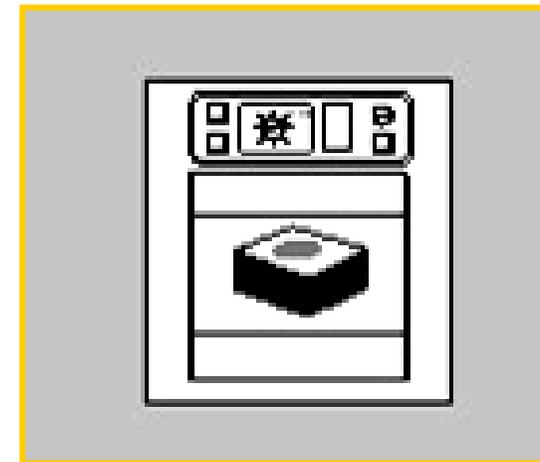


Quand le gel est solidifié,  
soulever doucement le film  
supérieur. Éviter de toucher la  
gélose réhydratée.

**La gélose reste sur le film  
supérieur.**



Appliquer le disque de gélose  
du film supérieur sur la surface  
à contrôler.

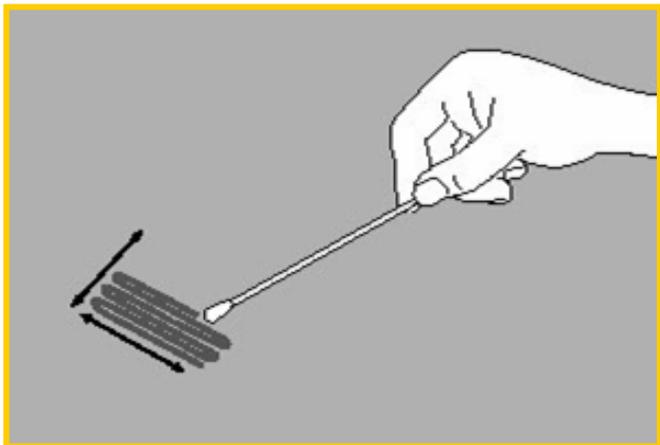


Retirer doucement le film de  
la surface, refermer le test  
3M™ Petrifilm™  
Incuber.

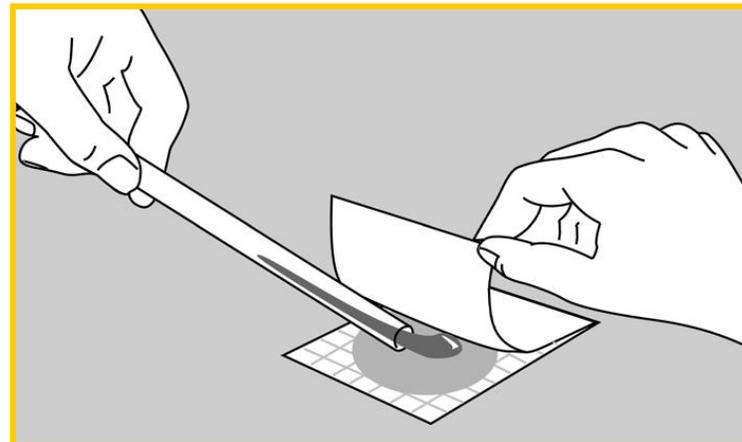
# Tests 3M™ Petrifilm™ - Mise en œuvre

## Méthode d'écouvillonnage classique

Analyses  
environnementales



Écouvillonner selon la méthode classique.



Déposer 1 ml sur le test 3M™ Petrifilm™,  
puis incubé.

Utiliser un diluant compatible avec l'utilisation des  
tests 3M™ Petrifilm™

Plus d'information dans les documentations  
techniques 3M

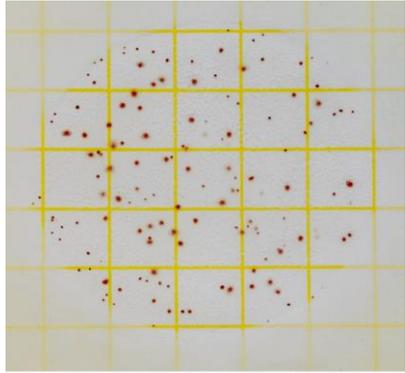


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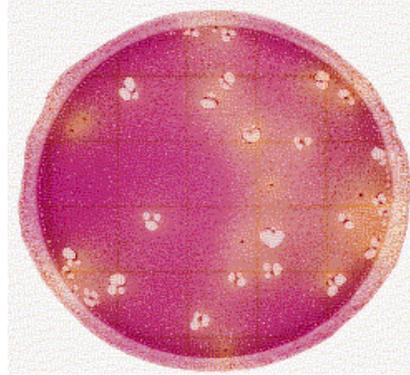
# Tests 3M™ Petrifilm™ La gamme



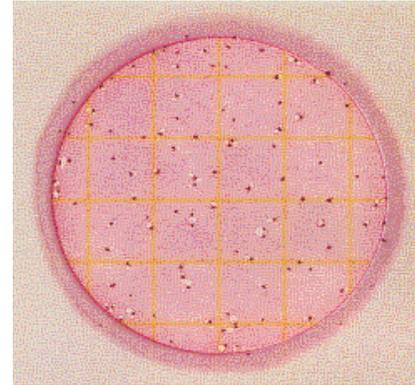
# Tests 3M™ Petrifilm™ - La gamme classique



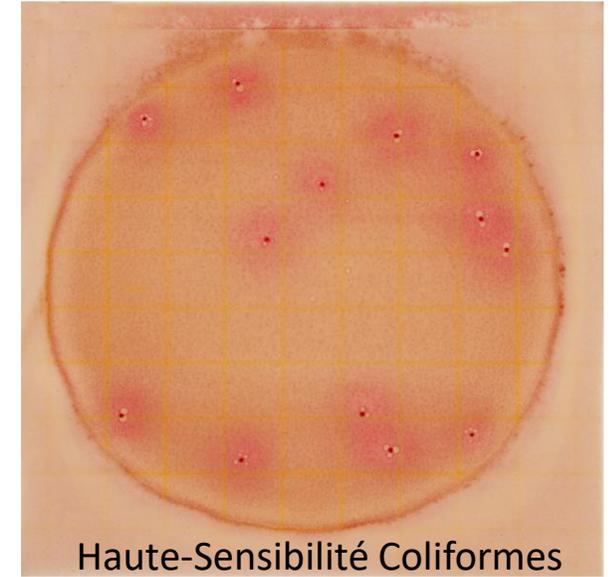
Flore Totale



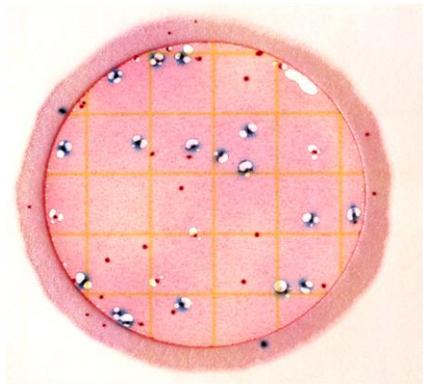
Enterobacteriaceae



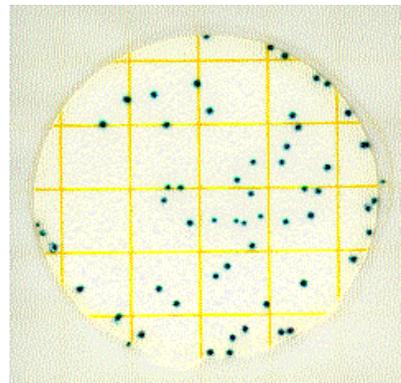
Coliformes



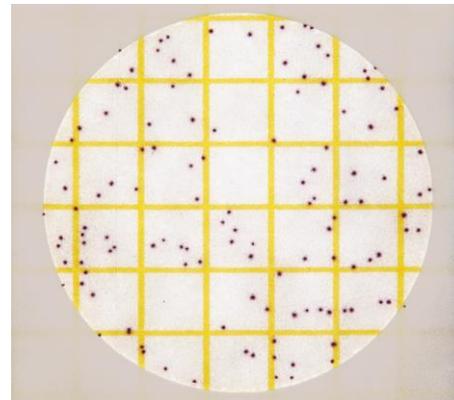
Haute-Sensibilité Coliformes



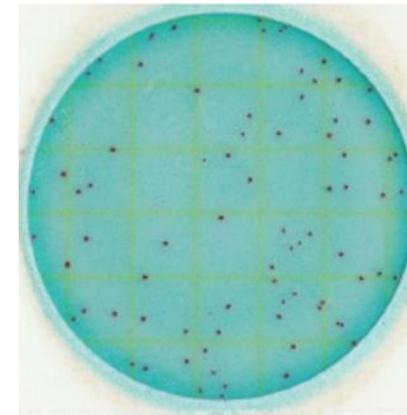
E.coli/Coliformes



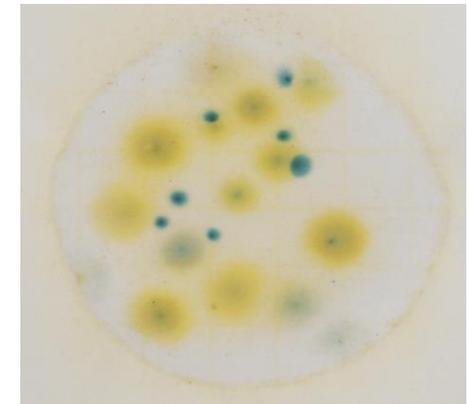
Select E. coli



Staph Express

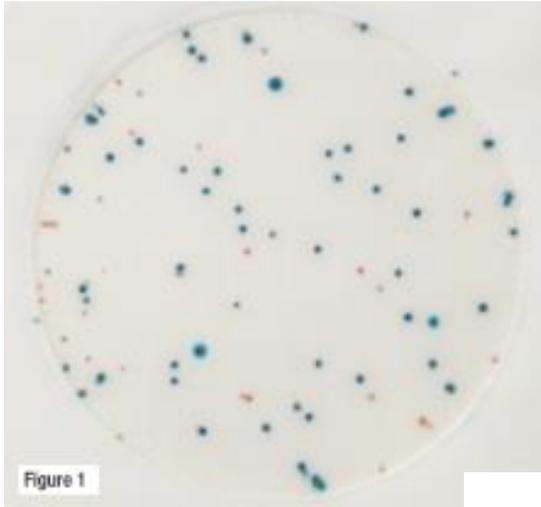


Bactéries Lactiques

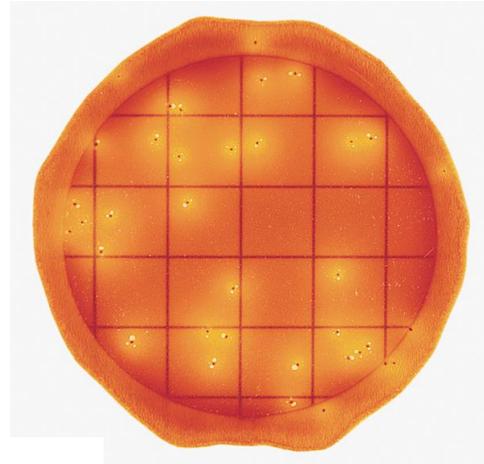


Levures et Moisissures

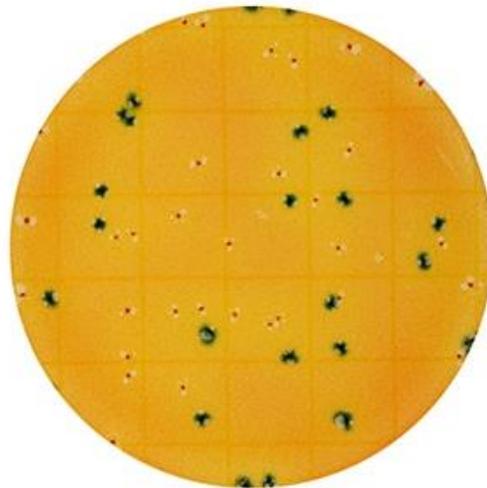
# Tests 3M™ Petrifilm™ - La gamme rapide



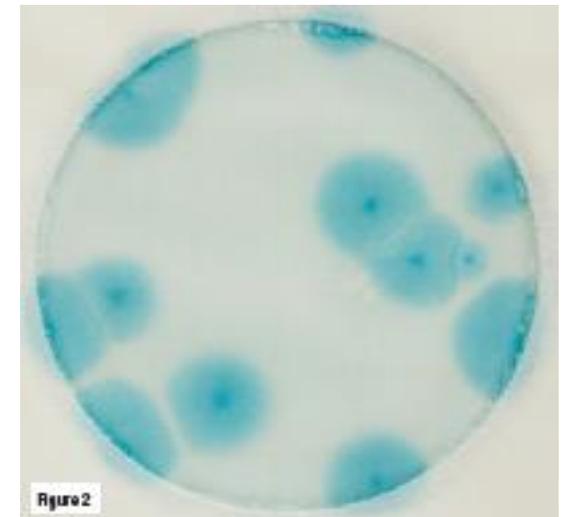
Rapide Flore Totale



Rapide Coliformes



Rapide E. coli et Coliformes



Rapide Levures et Moisissures



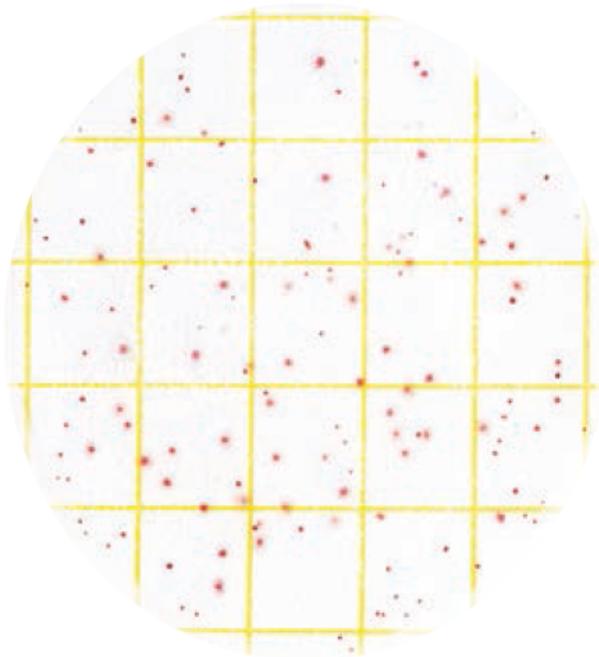
Petrifilm™



# 3M™ Petrifilm™

- Flore Totale

Dénombrer toutes les colonies visibles, peu importe la taille ou l'intensité de la coloration rouge.



**Aerobic Bacteria Count: 135**

Count all red colonies regardless of size or intensity.

**AC**  
Aerobic Count Plate

Product Code	6400 (box of 100 units) 6406 (box of 1,000 units)
Method: AOAC® Official Method of Analysis™	<b>Milk and Dairy Products</b> 48h ± 3h at 32°C ± 1°C  <b>All Other Foods</b> 48h ± 3h at 35°C ± 1°C
NF Validation by AFNOR Certification	<b>For All Foods</b> 72h ± 3h at 30°C ± 1°C  <b>All Foods Except Dairy and Raw Shellfish</b> 48h ± 3h at 30°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.6–7.2
Recommended Counting Range	<300 CFU
Counting Area	20cm²
Spreader Type	3M™ Petrifilm™ Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**AC**  
Aerobic Count Plate



Petrifilm™



# 3M™ Petrifilm™

- Rapide Flore Totale

Dénombrer toutes les colonies visibles, peu importe la taille ou la couleur



**Aerobic Bacteria Count: 88**

Blue and red indicator dyes in the plate color the colonies. Count all colonies regardless of their size or color intensity.

Product Code	6478 (box of 50 units) 6479 (case of 500 units)
Method: AOAC® Official Method of Analysis™	<b>Dairy (Not Including Powders) and Seafood</b> 24h ± 2h at 32°C ± 1°C  <b>All Other Foods</b> 24h ± 2h at 35°C ± 1°C  <b>Dairy Powders Including Whey Powders</b> 48h ± 3h at 32°C ± 1°C
NF Validation by AFNOR Certification	<b>Non-Powdered Dairy Products</b> 28h ± 2h at 30°C ± 1°C  <b>Powdered Milk</b> 48h ± 3h at 30°C ± 1°C
Incubation	Stacks of 40 or less (SMEDP: 20 or less)
Optimum pH Range	>5.0
Recommended Counting Range	<300 CFU
Counting Area	30cm²
Spreader Type	3M™ Petrifilm™ Flat Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**RAC**  
Rapid Aerobic Count Plate



**RAC**  
Rapid Aerobic Count Plate



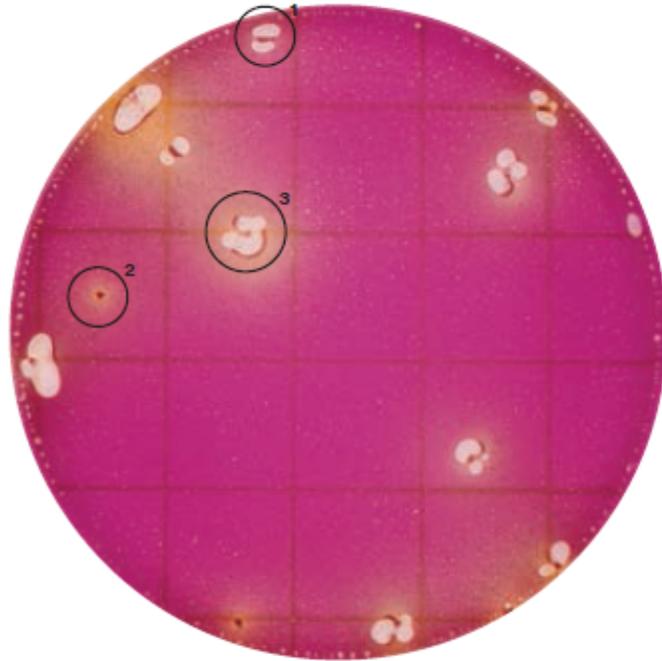


# 3M™ Petrifilm™

- Enterobacteriaceae

Les Enterobactéries forment des colonies rouges entourées ou non par un halo jaune et associées ou non à des bulles de gaz.

Les colonies rouges sans halo ni gaz ne sont pas des Entérobactéries



**Enterobacteriaceae Count: 13**

*Enterobacteriaceae* are red colonies with yellow zones and/or red colonies with gas bubbles with or without yellow zones.

Product Code	6420 (box of 50 units) 6421 (box of 1,000 units)
Method: AOAC® Official Method of Analysis™	<b>Selected Foods</b> 24h ± 2h at 37°C ± 1°C
NF Validation by AFNOR Certification	<b>All Human Food Products, Animal Feed and Industrial Environmental Samples</b> 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.5–7.5
Recommended Counting Range	<100 CFU
Counting Area	20cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**EB**  
**Enterobacteriaceae Count Plate**

**EB**  
**Enterobacteriaceae Count Plate**

**3M**

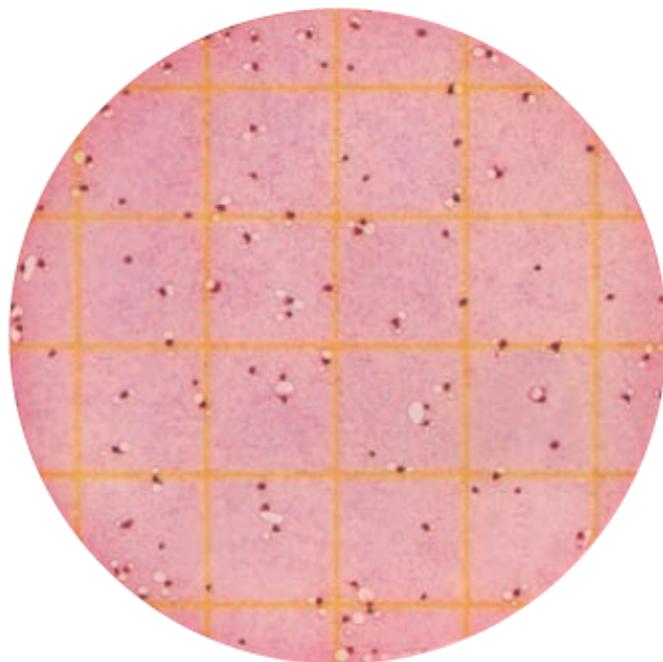
Petrifilm™



# 3M™ Petrifilm™

- Coliformes

Les coliformes produisent des colonies rouges associées ou non à des bulles de gaz.



AOAC® OMA, NF Validation Certified Method 3M 01/02–09/89 B  
**Coliform Count: 69** (colonies with gas)

NF Validation by AFNOR Certified Method 3M 01/02–09/89 A and 01/02–09/89 C  
**Coliform Count: 97** (total colonies)

**CC****Coliform Count Plate**

Product Code	6410 (box of 50 units) 6416 (box of 1,000 units)
Method: AOAC® Official Method of Analysis™	<b>Milk and Other Dairy Products</b> 24h ± 2h at 32°C ± 1°C  <b>Foods</b> 24h ± 2h at 35°C ± 1°C
NF Validation by AFNOR Certification	<b>3M 01/02-09/89 B</b> <b>All Human Food Products (Except Raw Shellfish)</b> 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C
<b>3M 01/02–09/89 A</b> <b>All Human Food Products (Except Shellfish), Pet Food and Environmental Samples</b> 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C	<b>3M 01/02–09/89 C</b> <b>All Human Food Products</b> 24h ± 2h at 44°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.6–7.2
Recommended Counting Range	<150 CFU
Counting Area	20cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**CC****Coliform Count Plate**

**3M**

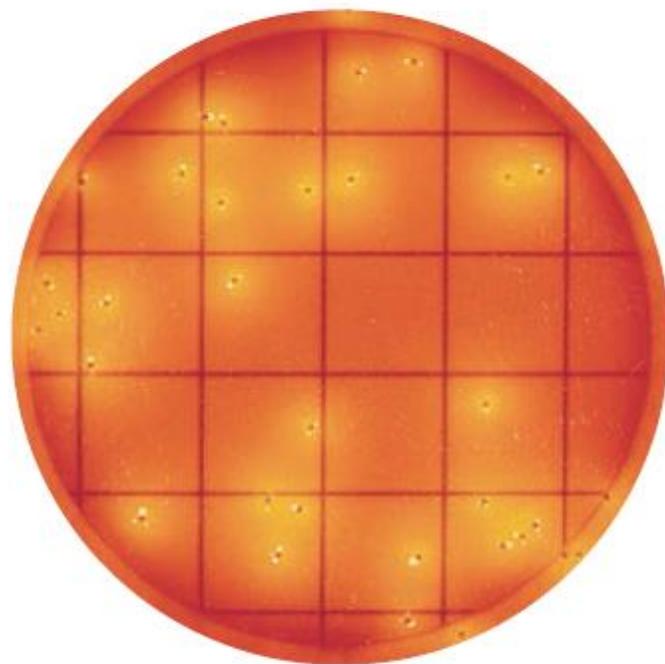
| Petrifilm™



# 3M™ Petrifilm™

- Rapide coliformes

Les coliformes produisent des colonies rouges entourées ou non par un halo jaune et associées ou non à des bulles de gaz.



Coliform Colony Enumeration  
(8–24 hours)

**RCC**  
Rapid Coliform Count Plate



Product Code	6402 (box of 50 units) 6412 (box of 500 units)
Method: AOAC® Official Method of Analysis™	<b>Foods</b> Up to 24h ± 2h at 35°C ± 1°C
NF Validation by AFNOR Certification	<b>Processed Pork and Seafood</b> 14h ± 30min at 30°C ± 1°C or 24h ± 2h at 30°C ± 1°C  <b>All Other Human Foods</b> 14h ± 30min at 35°C ± 1°C or 24h ± 2h at 35°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.5–7.5
Recommended Counting Range	<150 CFU
Counting Area	20cm²
Spreader Type	3M™ Petrifilm™ Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

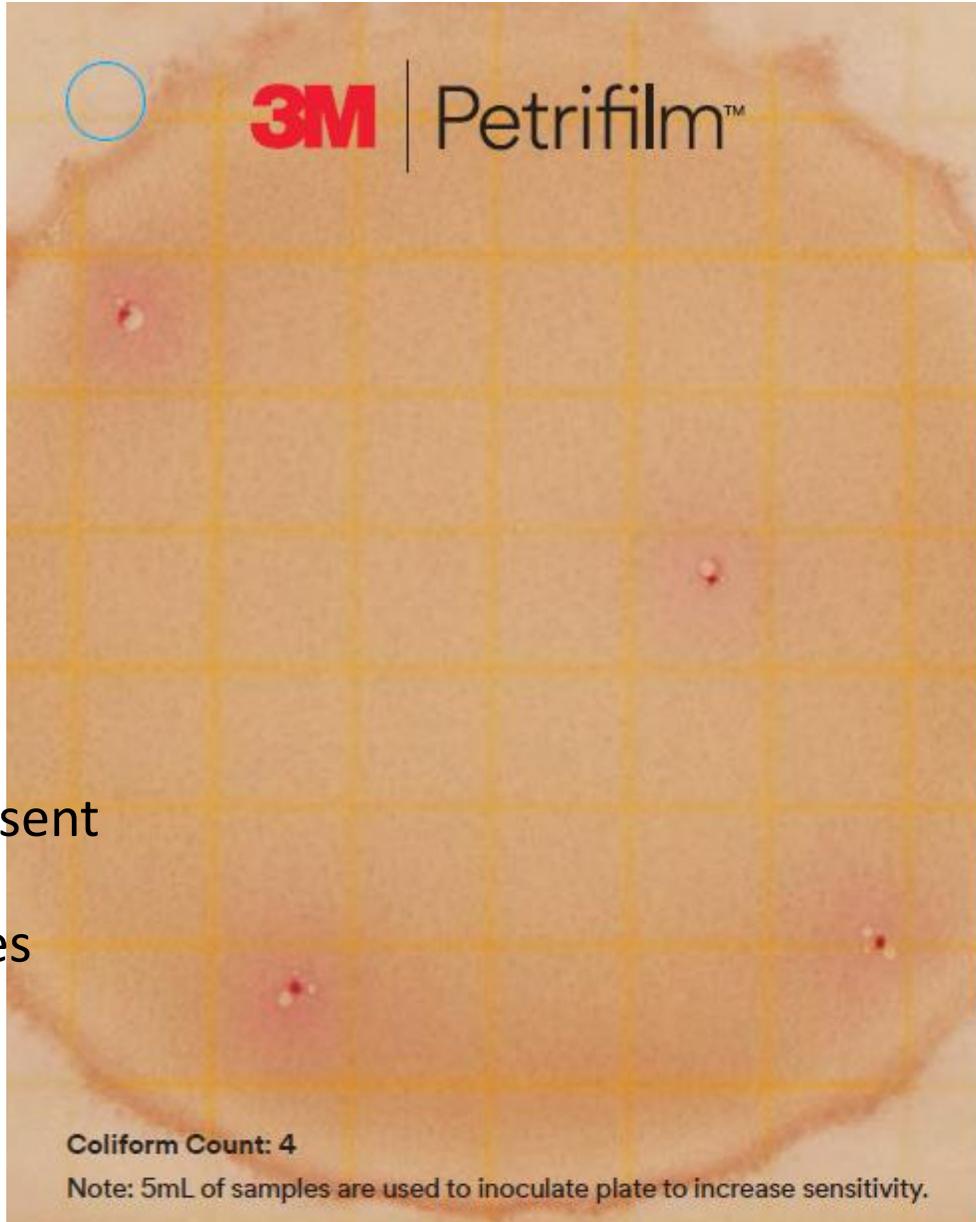
**RCC**  
Rapid Coliform Count Plate



# 3M™ Petrifilm™

- Haute-Sensibilité  
Coliformes

Les coliformes produisent  
des colonies rouges  
associées ou non à des  
bulles de gaz



**HSCC**  
High-Sensitivity Coliform Count Plate

Product Code	6405 (box of 50 units) 6415 (box of 500 units)
Method: AOAC® Official Method of Analysis™	<b>Dairy Products</b> 24h ± 2h at 32°C ± 1°C
NF Validation by AFNOR Certification	<b>Human Food Products</b> 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C
Method	<b>Thermotolerant Coliforms</b> 24h ± 2h at 44°C ± 1°C  <b>Incubator humidification is required at this elevated temperature.</b>
Incubation	Stacks of 10 or less
Optimum pH Range	6.5–7.5
Recommended Counting Range	<150 CFU
Counting Area	60cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ High Sensitivity Spreader (6481)

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**HSCC**  
High-Sensitivity Coliform Count Plate

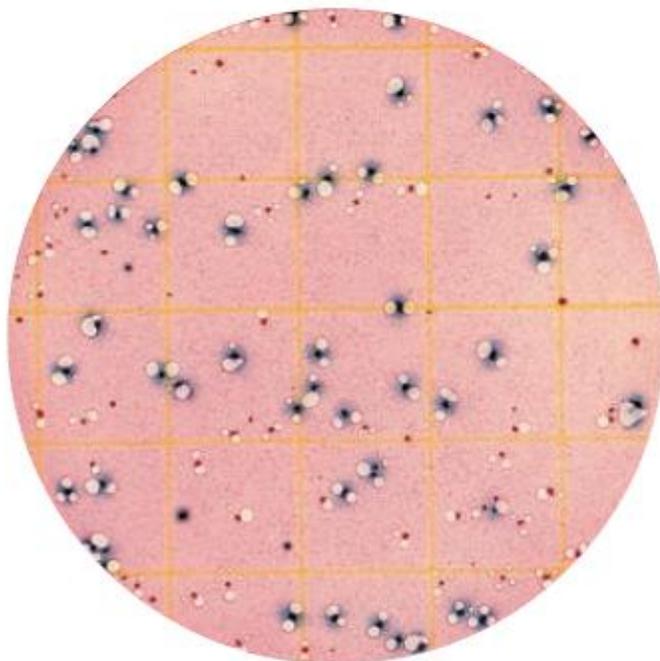


# 3M™ Petrifilm™

- E. coli & Coliformes

Les coliformes produisent des colonies rouges associées ou non à des bulles de gaz

Les E. coli produisent des colonies bleues associées ou non à des bulles de gaz



**E. coli Count: 49** (blue colonies with gas)  
**Total Coliform Count: 87** (red and blue colonies with gas)

**EC**  
**E. coli/Coliform Count Plate**

Product Code	6404 (box of 50 units) 6414 (box of 500 units)
Method: AOAC® Official Method of Analysis™	<b>Coliform in Foods</b> 24h ± 2h at 35°C ± 1°C  <b>E. coli in Foods</b> 48h ± 4h at 35°C ± 1°C  <b>Poultry, Meats and Seafood Coliforms and E. coli</b> 24h ± 2h at 35°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.6–7.2
Recommended Counting Range	<150 CFU
Counting Area	20cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**EC**  
**E. coli/Coliform Count Plate**

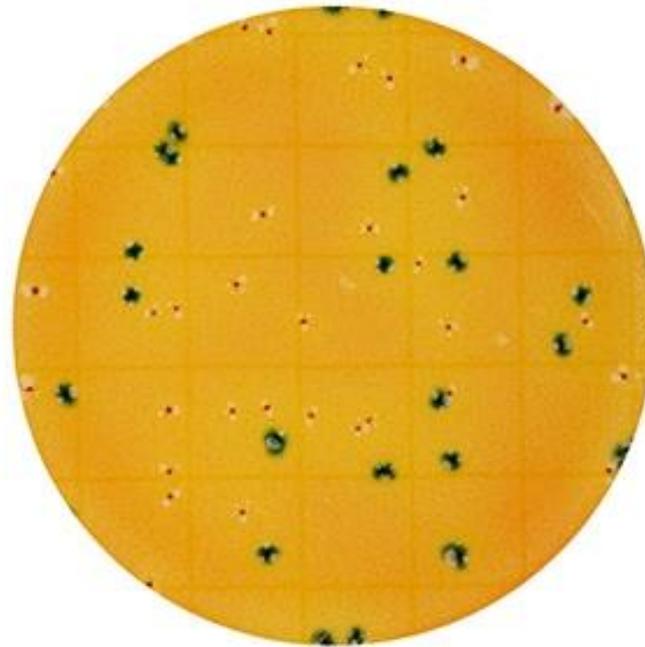


# 3M™ Petrifilm™

- Rapide E. coli & Coliformes

Les coliformes produisent des colonies rouges associées ou non à des bulles de gaz

Les E. coli produisent des colonies bleues associées ou non à des bulles de gaz



Product Code	6436 (box of 50 units) 6437 (case of 500 units)
Method: AOAC® Official Method of Analysis™	<b>Dairy (Not Including Powders) and Seafood</b> 24h ± 2h at 32°C ± 1°C  <b>All Other Foods</b> 24h ± 2h at 35°C ± 1°C  <b>Dairy Powders Including Whey Powders</b> 48h ± 3h at 32°C ± 1°C
MicroVal Certification (ISO 16140-2)	<u>Produits laitiers :</u> 18 à 24 h à 30 ± 1 °C pour les coliformes et E. coli ou 42 ± 1 °C pour E. coli. <u>Autres aliments :</u> 18 à 24 h à 37 ± 1 °C pour les coliformes et E. coli ou 42 ± 1 °C pour E. coli.
Incubation	Stacks of 40 or less (SMEDP: 20 or less)
Optimum pH Range	6.5 - 7.5
Recommended Counting Range	<300 CFU
Counting Area	30cm²
Spreader Type	3M™ Petrifilm™ Flat Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

## REC

Rapid E. coli/Coliform Count Plate



## REC

Rapid E. coli/Coliform Count Plate

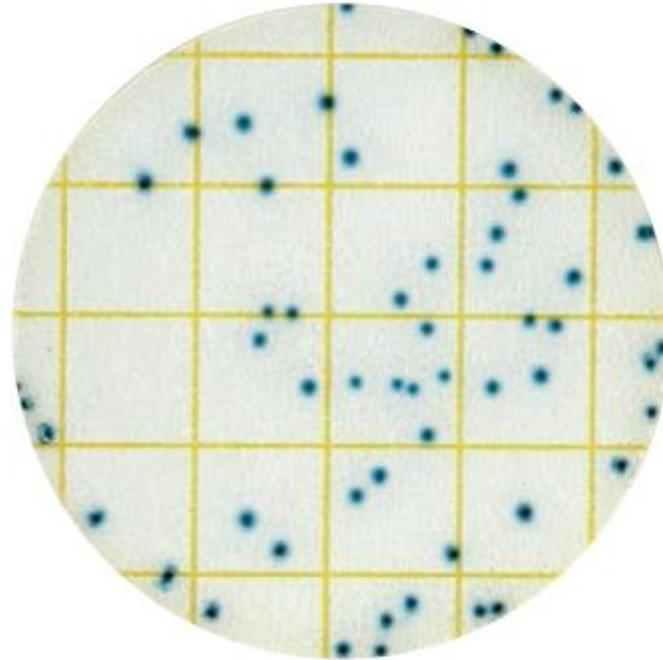




# 3M™ Petrifilm™

- Select E. coli

Les E. coli produisent des colonies bleues



*E. coli* Count: 56

**SEC**  
Select *E. coli* Count Plate

Product Code	6434 (box of 50 units) 6435 (box of 500 units)
NF Validation by AFNOR Certification	<b>All Human Food Products, Pet Food and Industrial Environmental Samples</b> 24h ± 2h at 42°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.5–7.5
Recommended Counting Range	<150 CFU
Counting Area	20cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Spreader

*Sold in select regions only.*

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**SEC**  
Select *E. coli* Count Plate

# 3M™ Petrifilm™

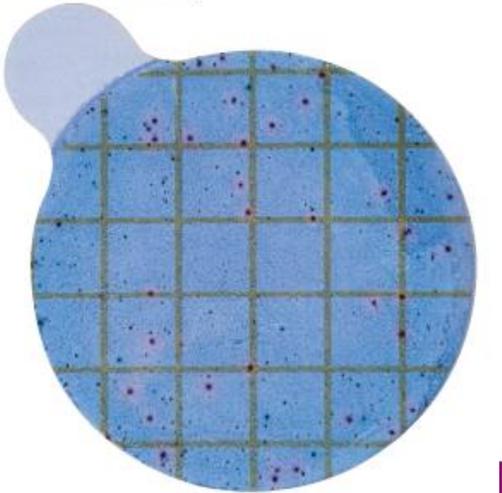
- Staph Express



***S. aureus* Count: 116**  
Red-violet colonies are *S. aureus*.

**STX**  
Staph Express Count Plate

## Staph Express Confirmation Disk



Pink zones form with DNase reaction from *S. aureus*.

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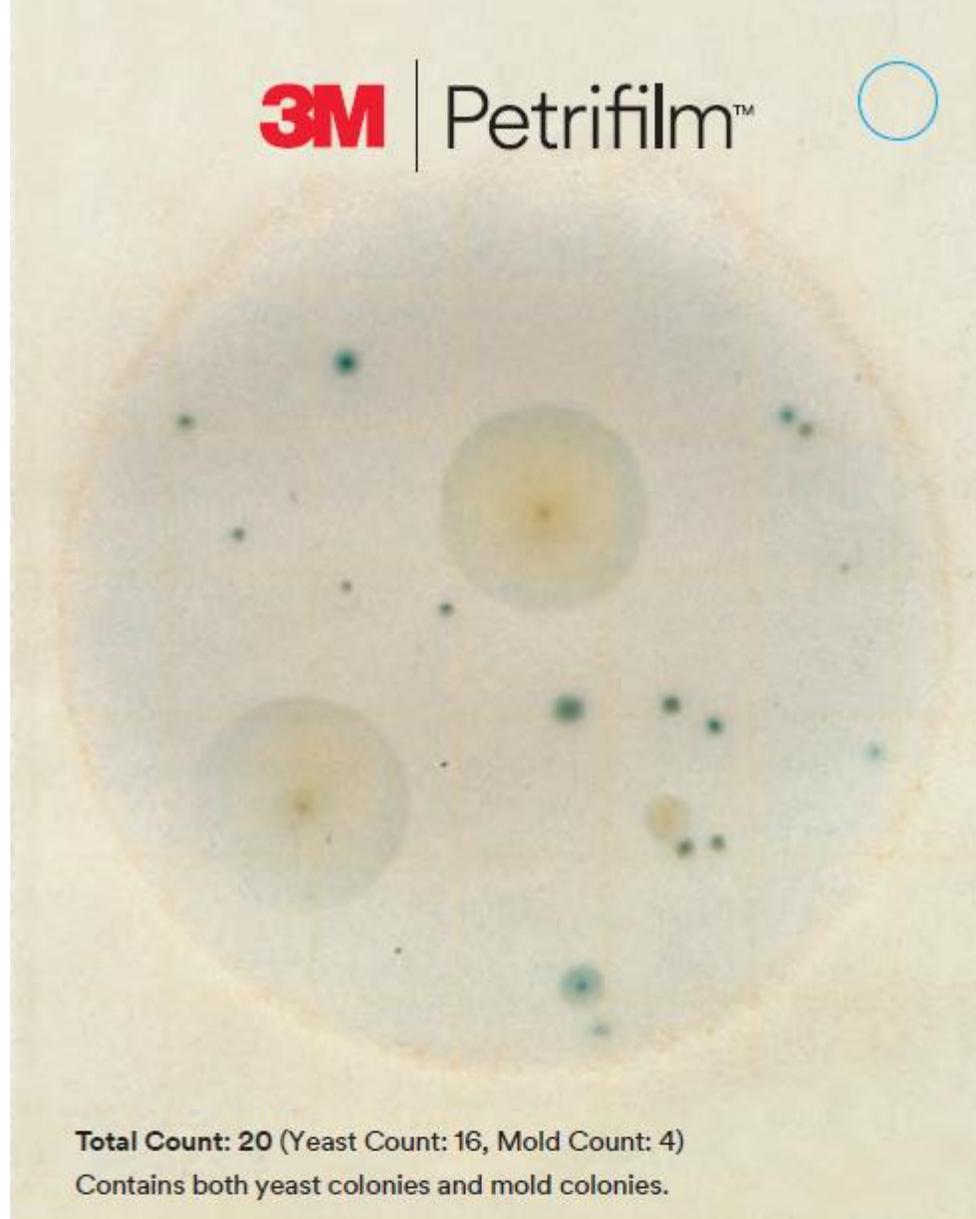
Product Code	<b>Plates</b> 6490 (box of 50 units) 6491 (box of 500 units) <b>Disks</b> 6492 (box of 20 units) 6493 (box of 100 units)
Method: AOAC® Official Method of Analysis™	<b>In Food</b> <b>Plate:</b> 24h ± 2h at 35°C ± 1°C or 37°C ± 1°C <b>Disk:</b> 1–3h at 35°C ± 1°C or 37°C ± 1°C
NF Validation by AFNOR Certification	<b>All Human Food and Pet Food</b> <b>Plate:</b> 24h ± 2h at 37°C ± 1°C <b>Disk:</b> 3h at 37°C ± 1°C
Incubation	Stacks of 20 or less
Optimum pH Range	6.0–8.0
Recommended Counting Range	<150 CFU
Counting Area	30cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Flat Spreader

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**STX**  
Staph Express Count Plate

# 3M™ Petrifilm™

- Levures et Moisissures



**Total Count: 20** (Yeast Count: 16, Mold Count: 4)  
Contains both yeast colonies and mold colonies.

**YM**  
Yeast and Mold Count Plate

Product Code	6407 (box of 100 units) 6417 (box of 1,000 units)
Method: AOAC® Official Method of Analysis™	<b>Foods</b> 5 days at 20–25°C
Incubation	Stacks of 20 or less
Optimum pH Range	Not Applicable
Recommended Counting Range	<150 CFU
Counting Area	30cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Yeast and Mold Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

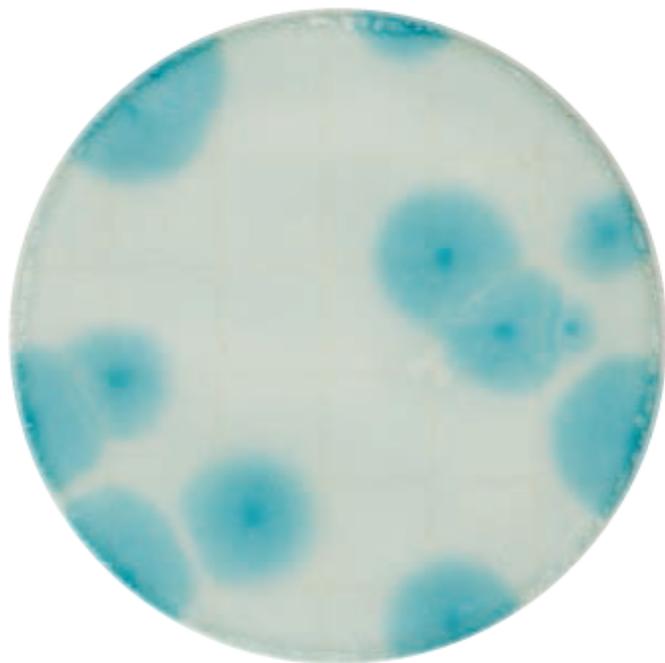
**YM**  
Yeast and Mold Count Plate

**3M**

| Petrifilm™



# 3M™ Petrifilm™



**Mold Count: 12 (after 48 hours)**

Mold Characteristics: Large colonies, colonies have diffused edges, blue-green to variable upon prolonged incubation, colonies appear flat and colonies have a dark center with diffused edge.

**RYM**  
Rapid Yeast and Mold Count Plate



Product Code	6475 (box of 50 units) 6477 (case of 500 units)
Method: AOAC® Official Method of Analysis™	<b>Select Foods</b> 48–60h at 25°C ± 1°C or 28°C ± 1°C
NF Validation by AFNOR Certification	<b>All Human Food Products, Animal Feed and Environmental Products (Primary Production Samples Excepted)</b>  60–72h at 25°C ± 1°C or 28°C ± 1°C
Incubation	Stacks of 40 or less
Optimum pH Range	Not Applicable
Recommended Counting Range	<150 CFU
Counting Area	30cm²
Spreader Type	3M™ Petrifilm™ Flat Spreader

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**RYM**  
Rapid Yeast and Mold Count Plate



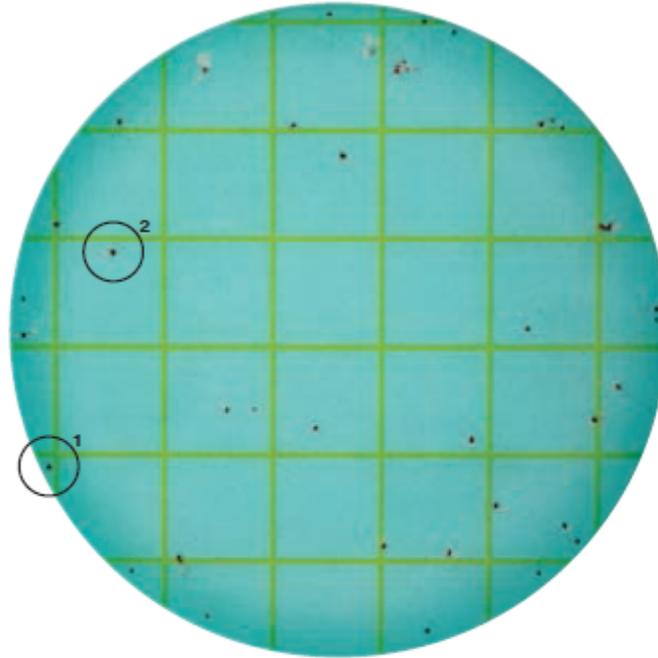
# 3M™ Petrifilm™

- Bactéries Lactiques

Les bactéries lactiques produisent des colonies rouges associées ou non à des bulles de gaz

Sans gaz =  
homofermentaires

Avec gaz =  
Hétérofermentaires



**Total Lactic Acid Bacteria Count: 41**

Circle 1: Homofermentative colony (non-gas producing).

Circle 2: Heterofermentative colony (gas producing).

**LAB**  
Lactic Acid Bacteria Count Plate

Product Code	6461 (box of 50 units) 6462 (case of 500 units)
Method	<b>Foods and Environmental Samples</b> Incubate 48h ± 3h at appropriate temperature between 28–37°C
Incubation	Stacks of 20 or less
Optimum pH Range	Not Applicable
Recommended Counting Range	<b>Colonies Without Gas</b> <300 CFU <b>Colonies With and Without Gas</b> <150 CFU
Counting Area	30cm <sup>2</sup>
Spreader Type	3M™ Petrifilm™ Flat Spreader

Visit the 3M Food Safety website at [3M.com/FoodSafety](https://www.3m.com/FoodSafety) for product information and product instructions which include information regarding validation recognition, scope and end of validity.

**LAB**  
Lactic Acid Bacteria Count Plate



Questions?