



3MSM Health Care Academy

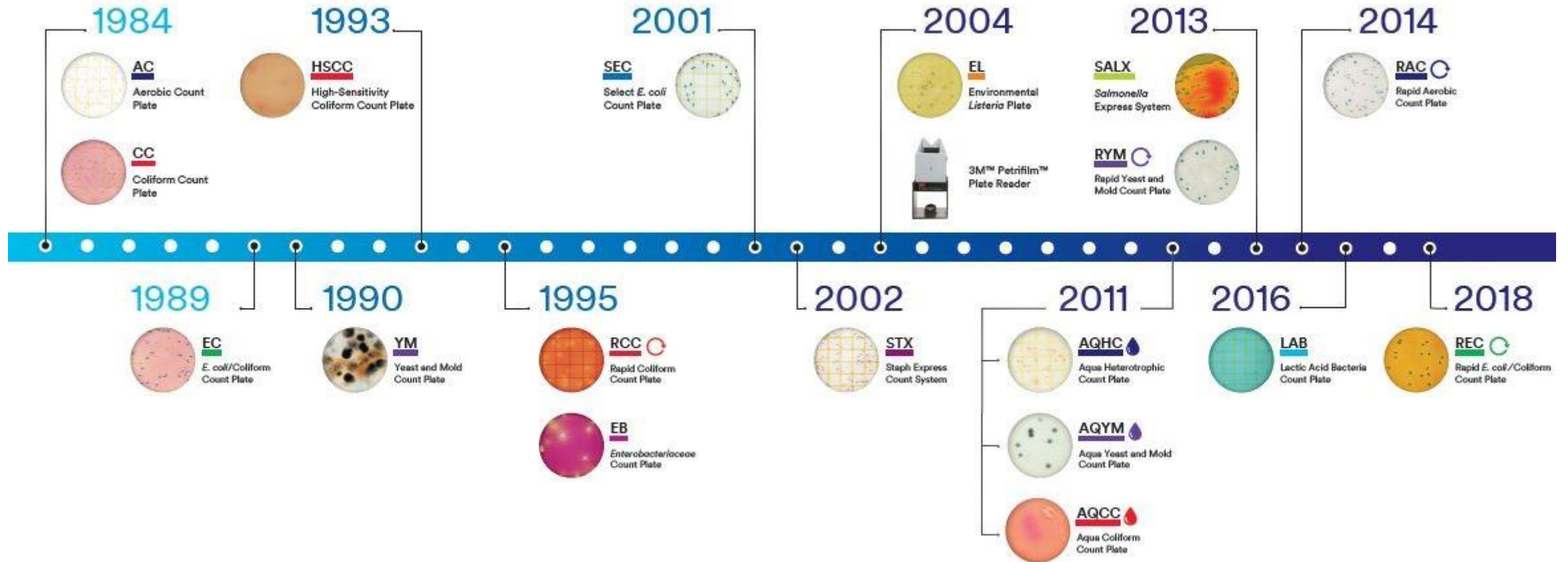
Présentation Générale des tests 3MTM PetrifilmTM



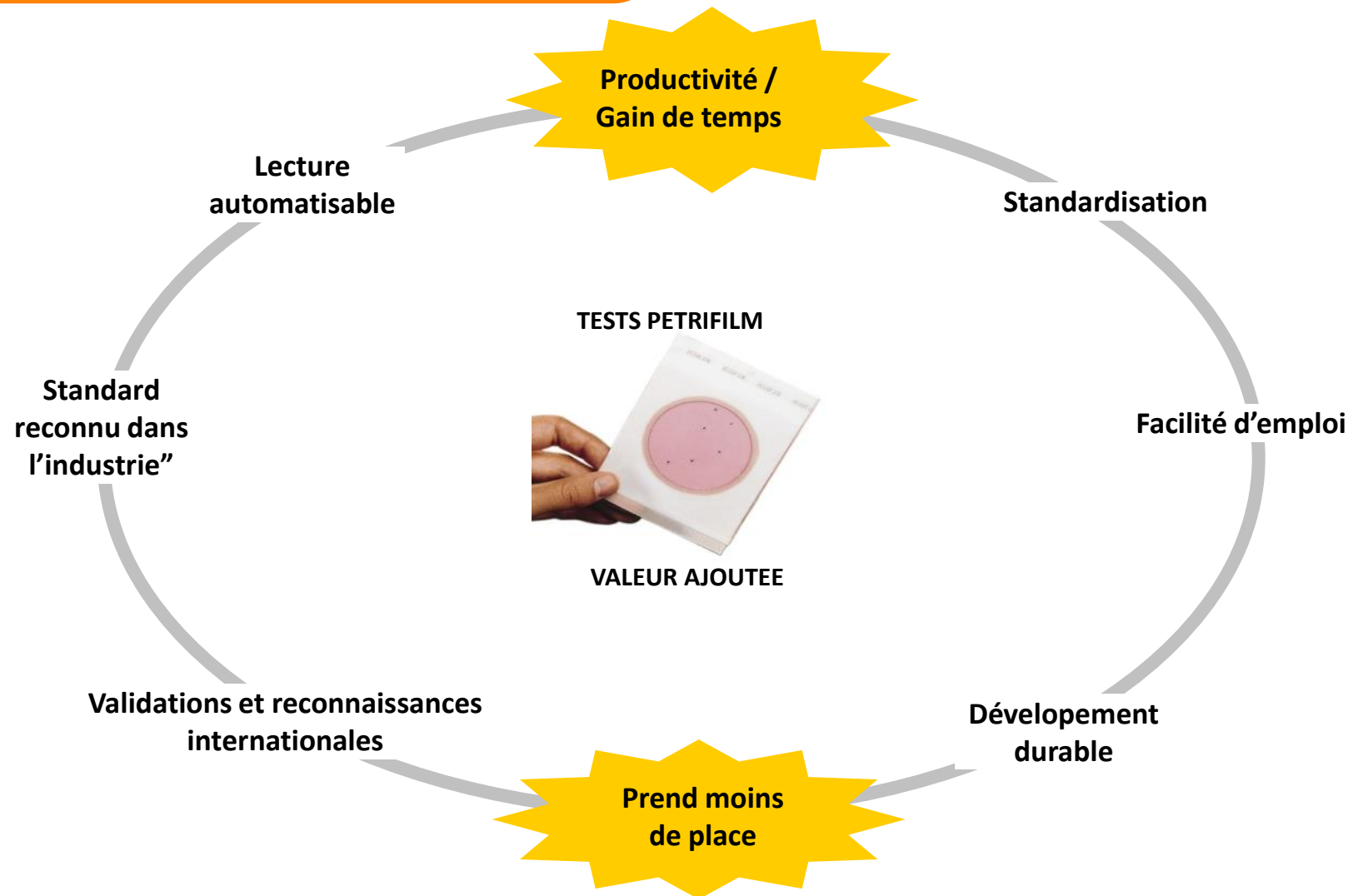
Jean-François David, Conseiller Scientifique

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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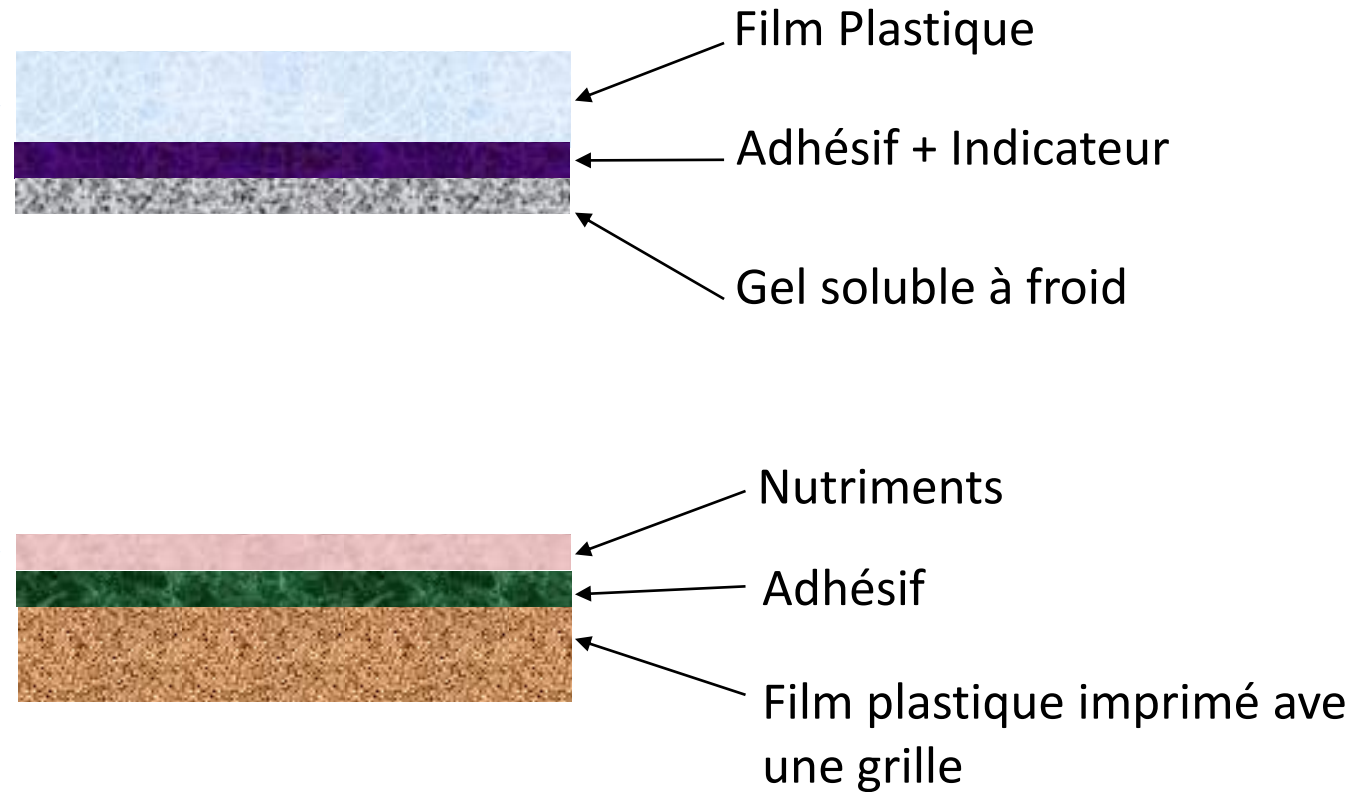
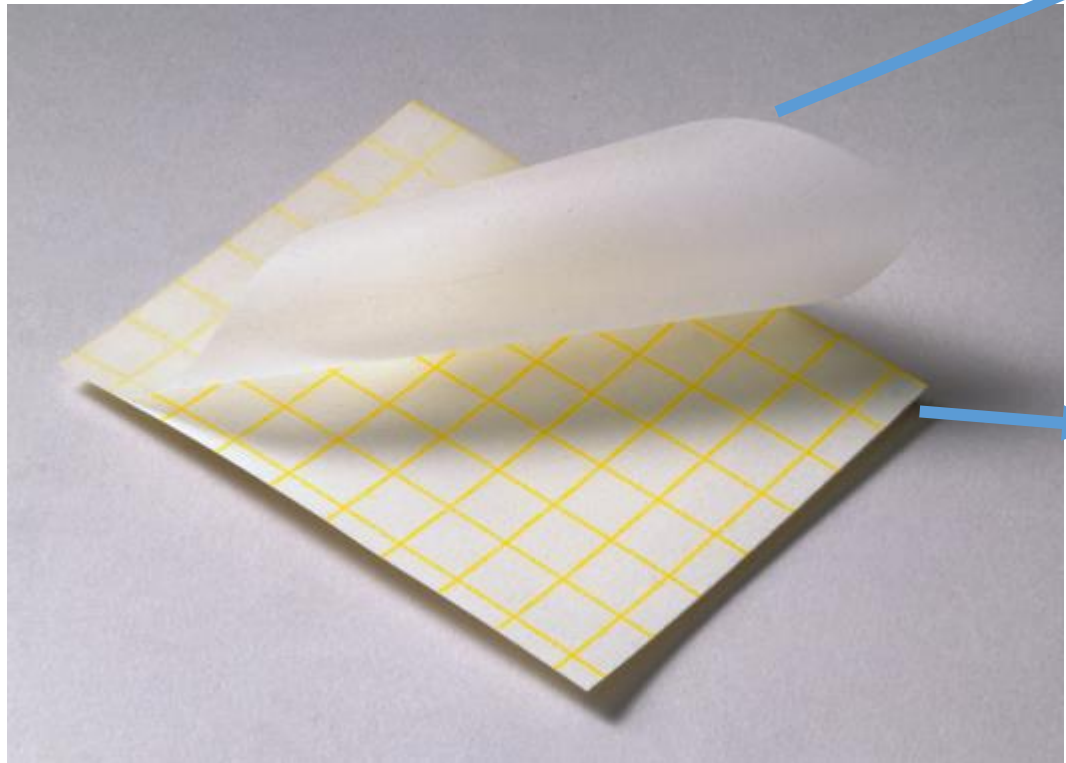
Tests 3M™ Petrifilm™ Caractéristiques générales



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



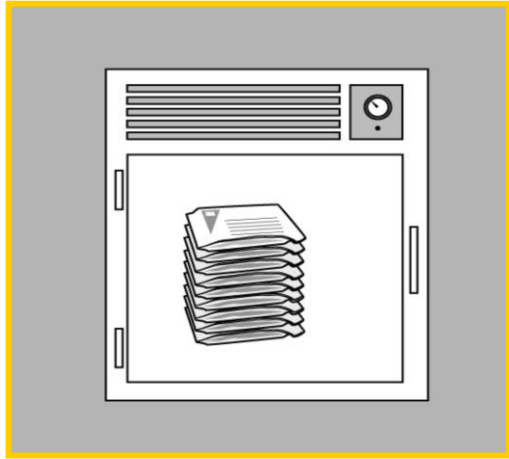
Durée de vie :

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

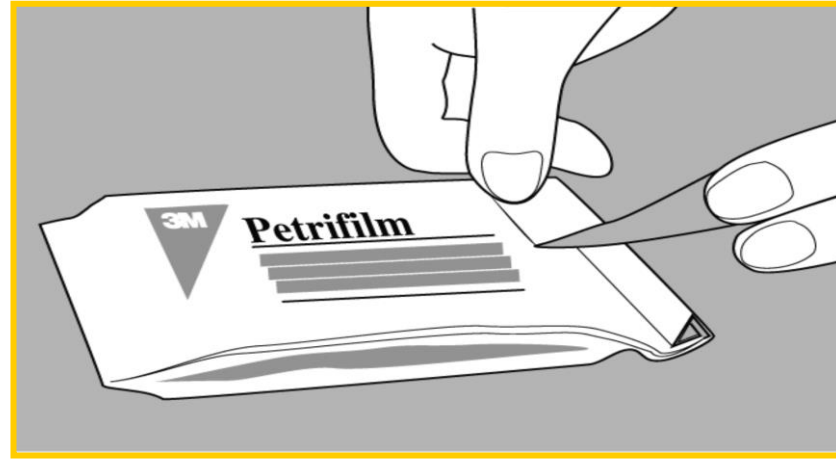
Tests 3M™ Petrifilm™ - Stockage

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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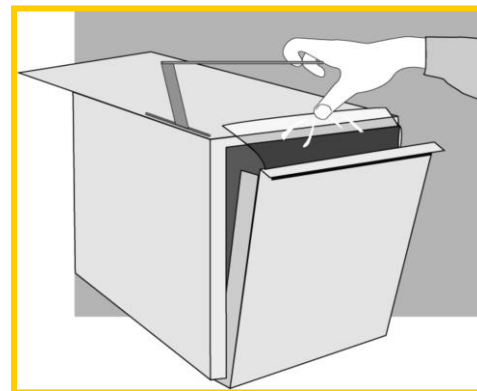
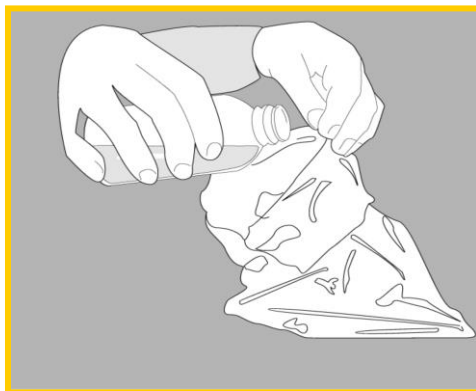
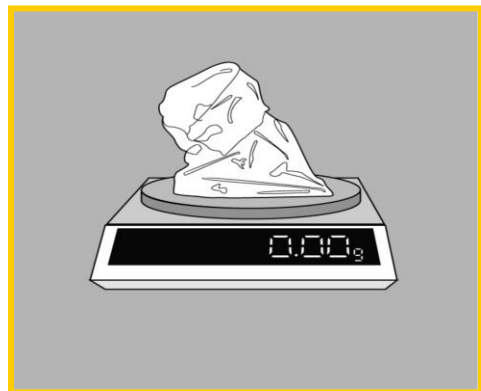
Tests 3M™ Petrifilm™ Mise en œuvre



Tests 3M™ Petrifilm™ - Mise en œuvre

Analyses
produits

Préparation des échantillons



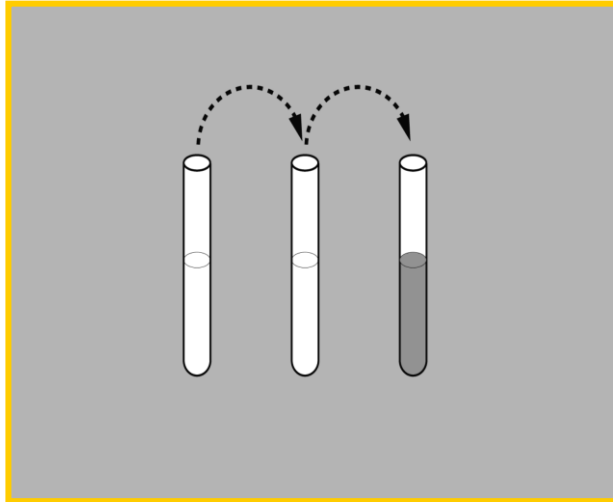
Peser les échantillons, ajouter du diluant, broyer ou homogénéiser

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.

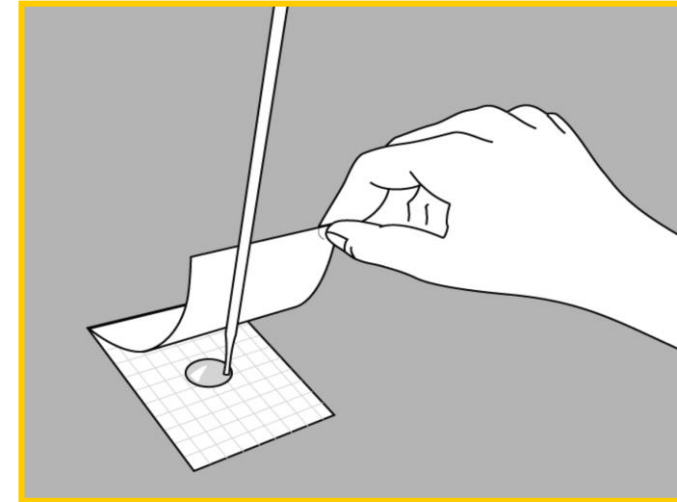
Tests 3M™ Petrifilm™ - Mise en œuvre

Analyses
produits

Dilution et inoculation



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



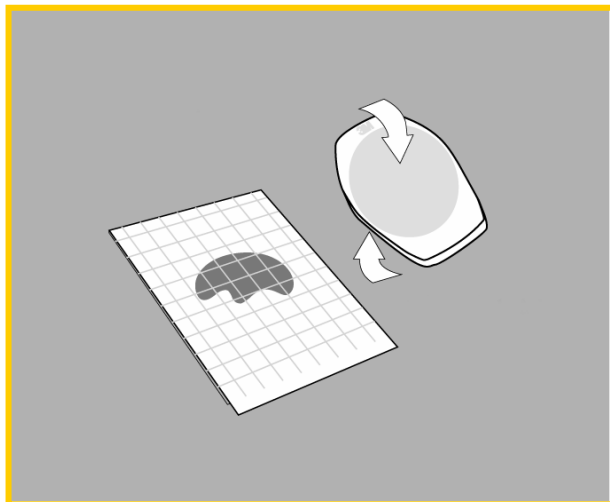
Placer 1 ml de l'échantillon dilué au centre du film inférieur.

(5 ml pour le test Haute-Sensibilité coliformes)

Tests 3M™ Petrifilm™ - Mise en œuvre

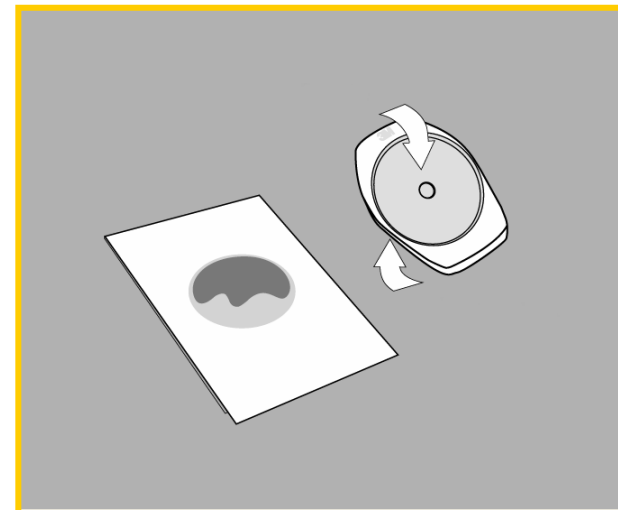
Analyses
produits

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

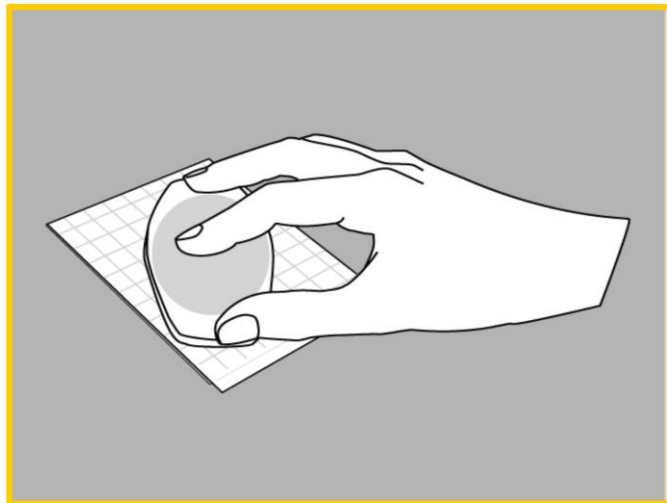
Utiliser la face plate au contact du test Petrifilm

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

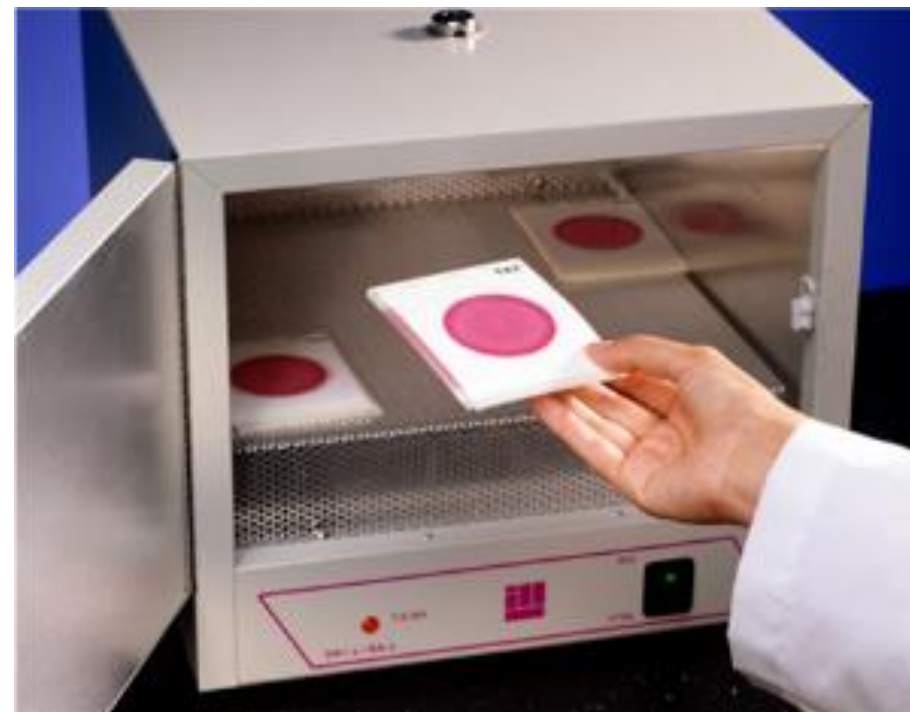
Étalement des échantillons



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

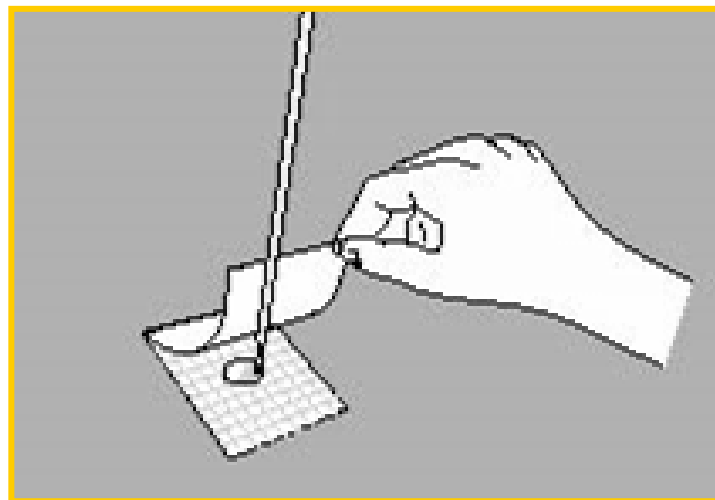


Tests 3M™ Petrifilm™ - Mise en œuvre

Préparation

Analyses
environnementales

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



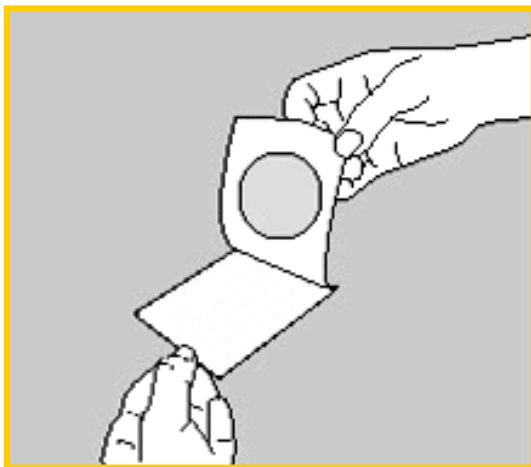
Selon les instructions données dans les fiches techniques :

- 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

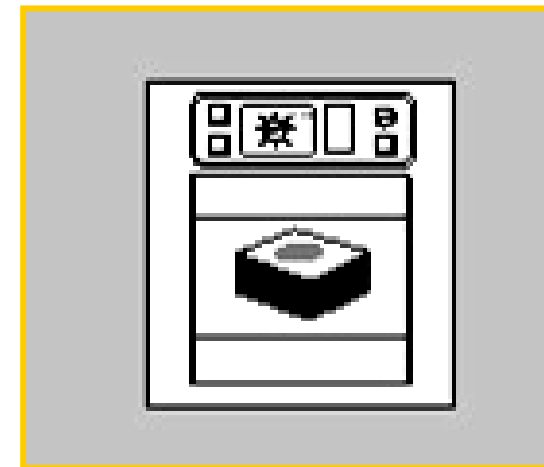


Quand le gel est solidifié,
soulever doucement le film
supérieur. Éviter de toucher la
gélose réhydratée.

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



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

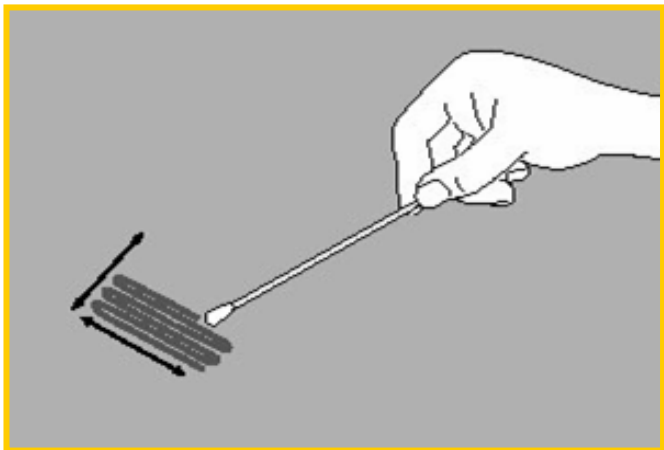


Retirer doucement le film de
la surface, refermer le test
3M™ Petrifilm™
Incuber.

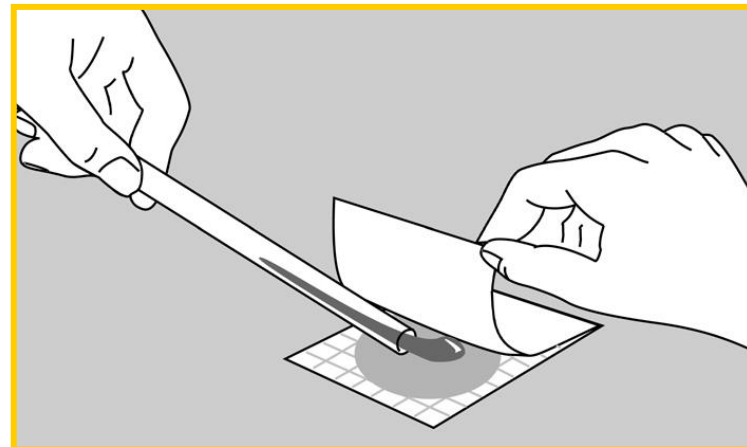
Tests 3M™ Petrifilm™ - Mise en œuvre

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

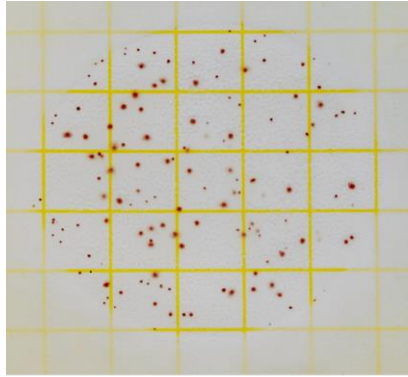


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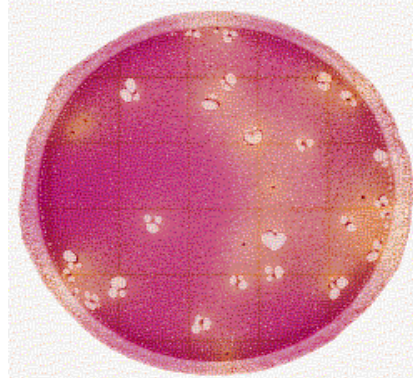
Tests 3M™ Petrifilm™ La gamme



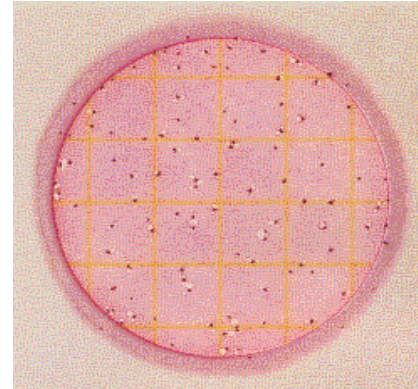
Tests 3M™ Petrifilm™ - La gamme classique



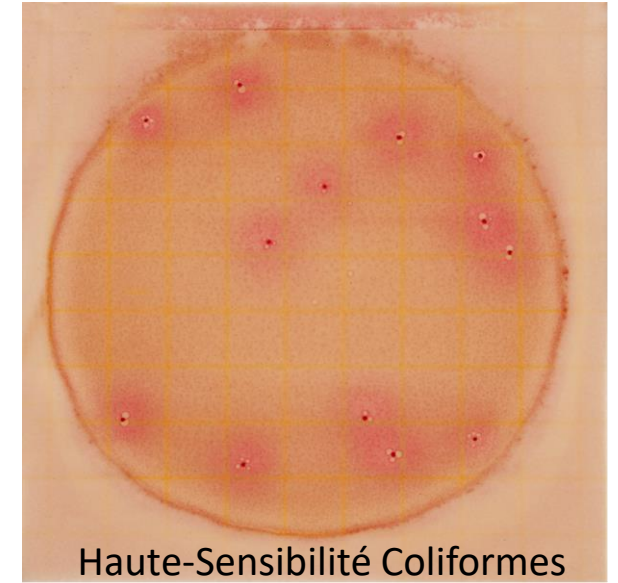
Flore Totale



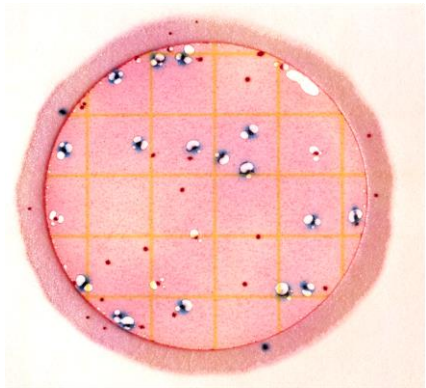
Enterobacteriaceae



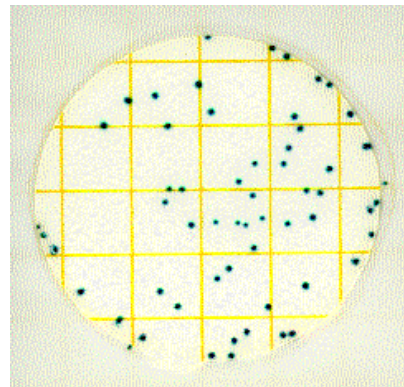
Coliformes



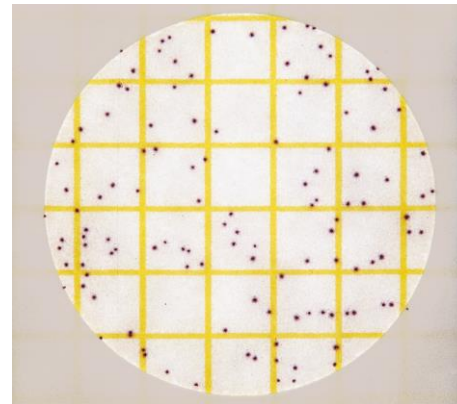
Haute-Sensibilité Coliformes



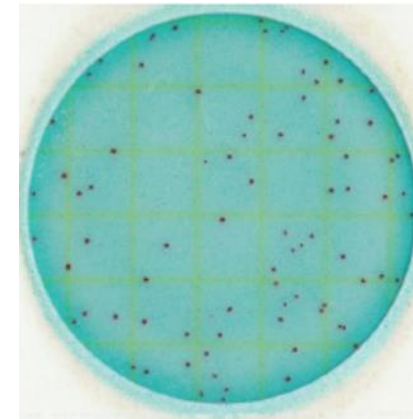
E.coli/Coliformes



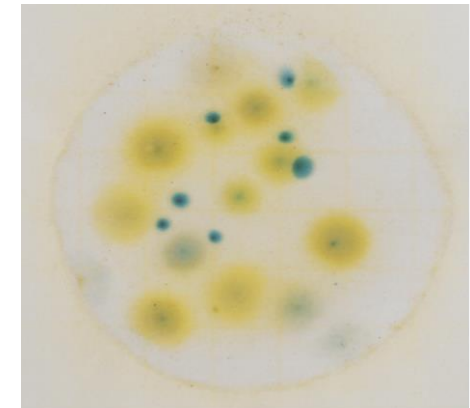
Select E. coli



Staph Express

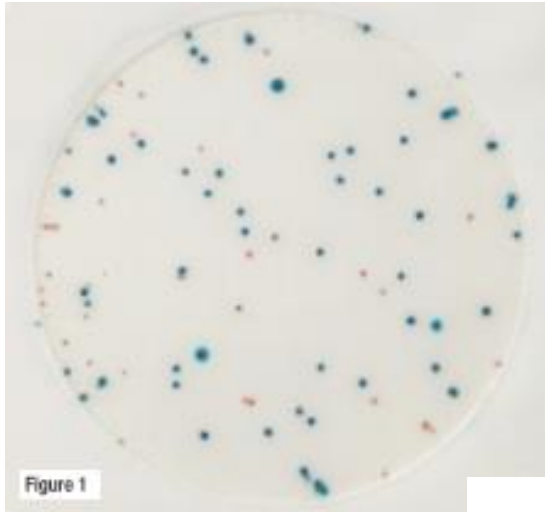


Bactéries Lactiques

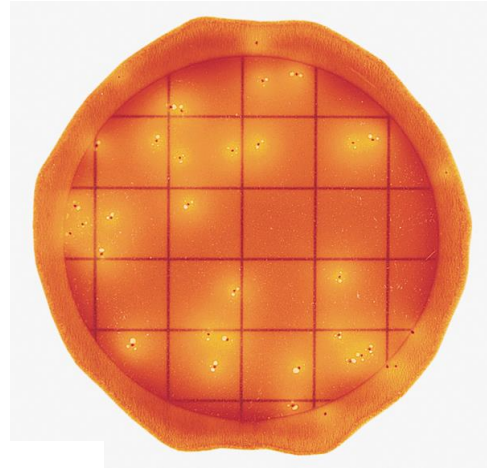


Levures et Moisissures

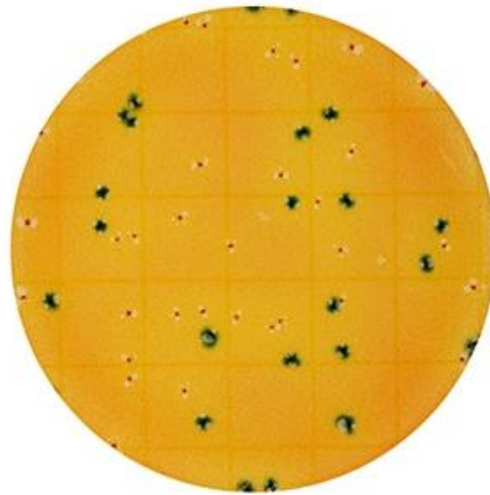
Tests 3M™ Petrifilm™ - La gamme rapide



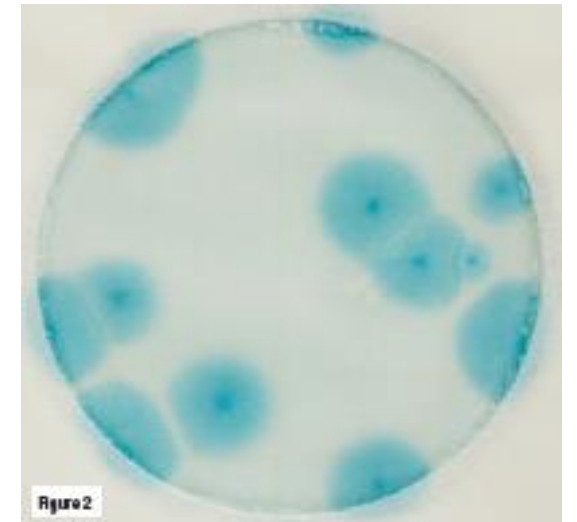
Rapide Flore Totale



Rapide Coliformes



Rapide E. coli et Coliformes



Rapide Levures et Moisissures



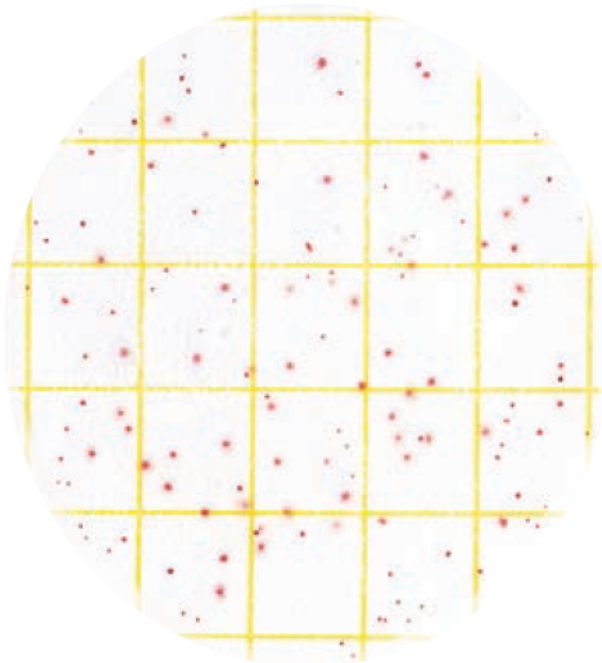
Petrifilm™



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™	Milk and Dairy Products 48h ± 3h at 32°C ± 1°C All Other Foods 48h ± 3h at 35°C ± 1°C
NF Validation by AFNOR Certification	For All Foods 72h ± 3h at 30°C ± 1°C All Foods Except Dairy and Raw Shellfish 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

**3M**

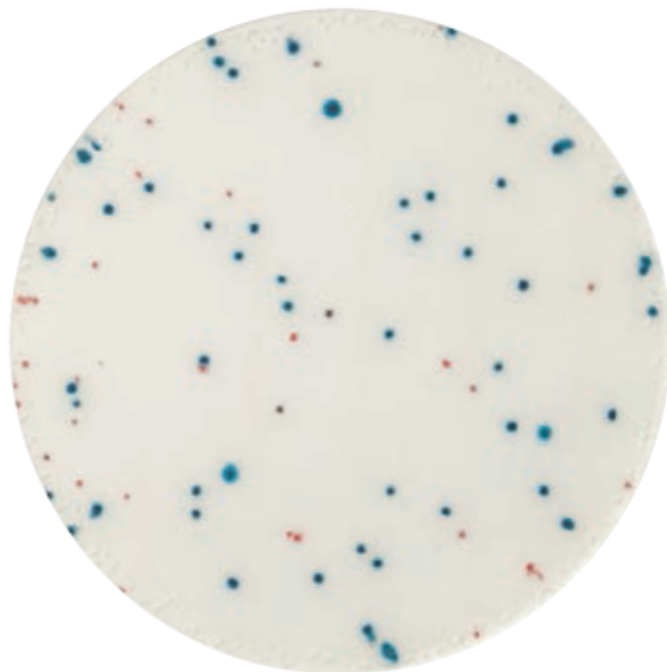
Petrifilm™



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™	Dairy (Not Including Powders) and Seafood 24h ± 2h at 32°C ± 1°C All Other Foods 24h ± 2h at 35°C ± 1°C Dairy Powders Including Whey Powders 48h ± 3h at 32°C ± 1°C
NF Validation by AFNOR Certification	Non-Powdered Dairy Products 28h ± 2h at 30°C ± 1°C Powdered Milk 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

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RAC
Rapid Aerobic Count Plate



RAC
Rapid Aerobic Count Plate



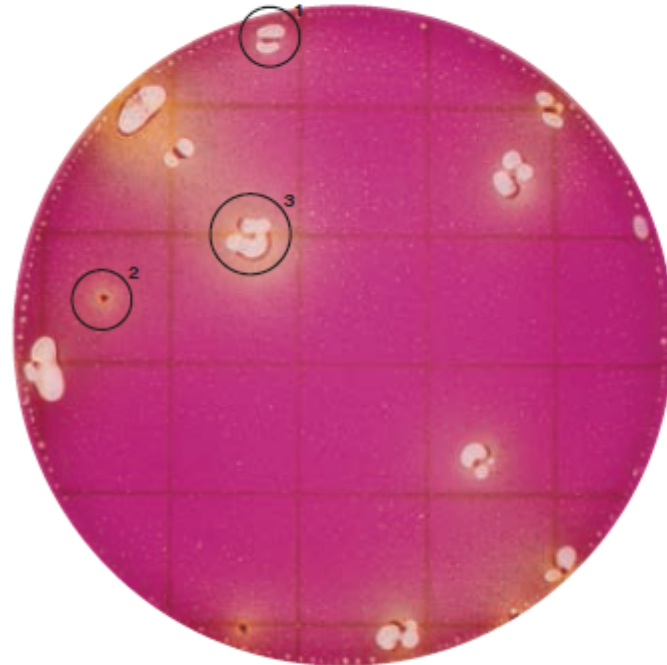


3M™ Petrifilm™

- 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.

EB
Enterobacteriaceae Count Plate

Product Code	6420 (box of 50 units) 6421 (box of 1,000 units)
Method: AOAC® Official Method of Analysis™	Selected Foods 24h ± 2h at 37°C ± 1°C
NF Validation by AFNOR Certification	All Human Food Products, Animal Feed and Industrial Environmental Samples 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 ²
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

**3M**

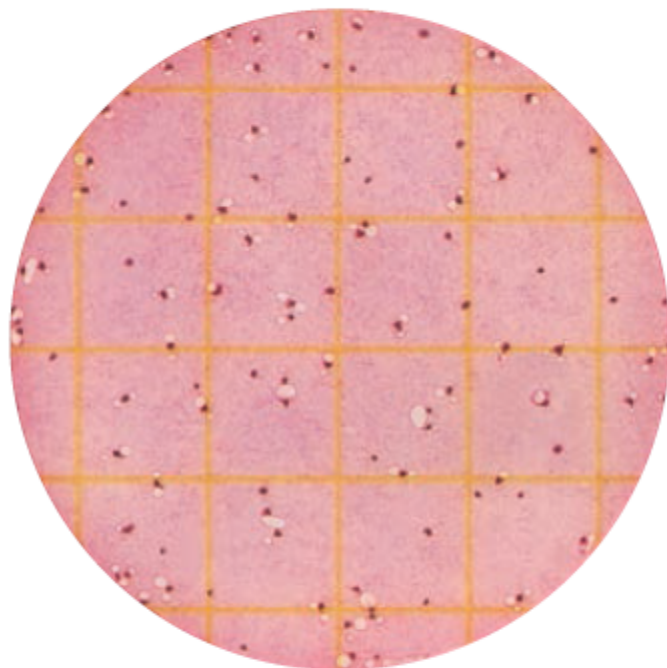
Petrifilm™



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™	Milk and Other Dairy Products 24h ± 2h at 32°C ± 1°C Foods 24h ± 2h at 35°C ± 1°C
NF Validation by AFNOR Certification	3M 01/02-09/89 B All Human Food Products (Except Raw Shellfish) 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C
3M 01/02–09/89 A All Human Food Products (Except Shellfish), Pet Food and Environmental Samples 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C	3M 01/02–09/89 C All Human Food Products 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 ²
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**

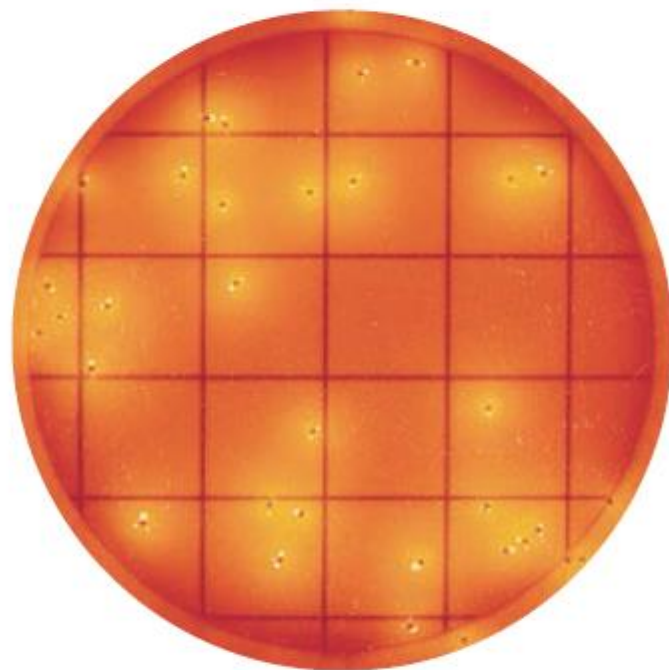
| Petrifilm™



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™	Foods Up to 24h ± 2h at 35°C ± 1°C
NF Validation by AFNOR Certification	Processed Pork and Seafood 14h ± 30min at 30°C ± 1°C or 24h ± 2h at 30°C ± 1°C All Other Human Foods 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	20cm ²
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.

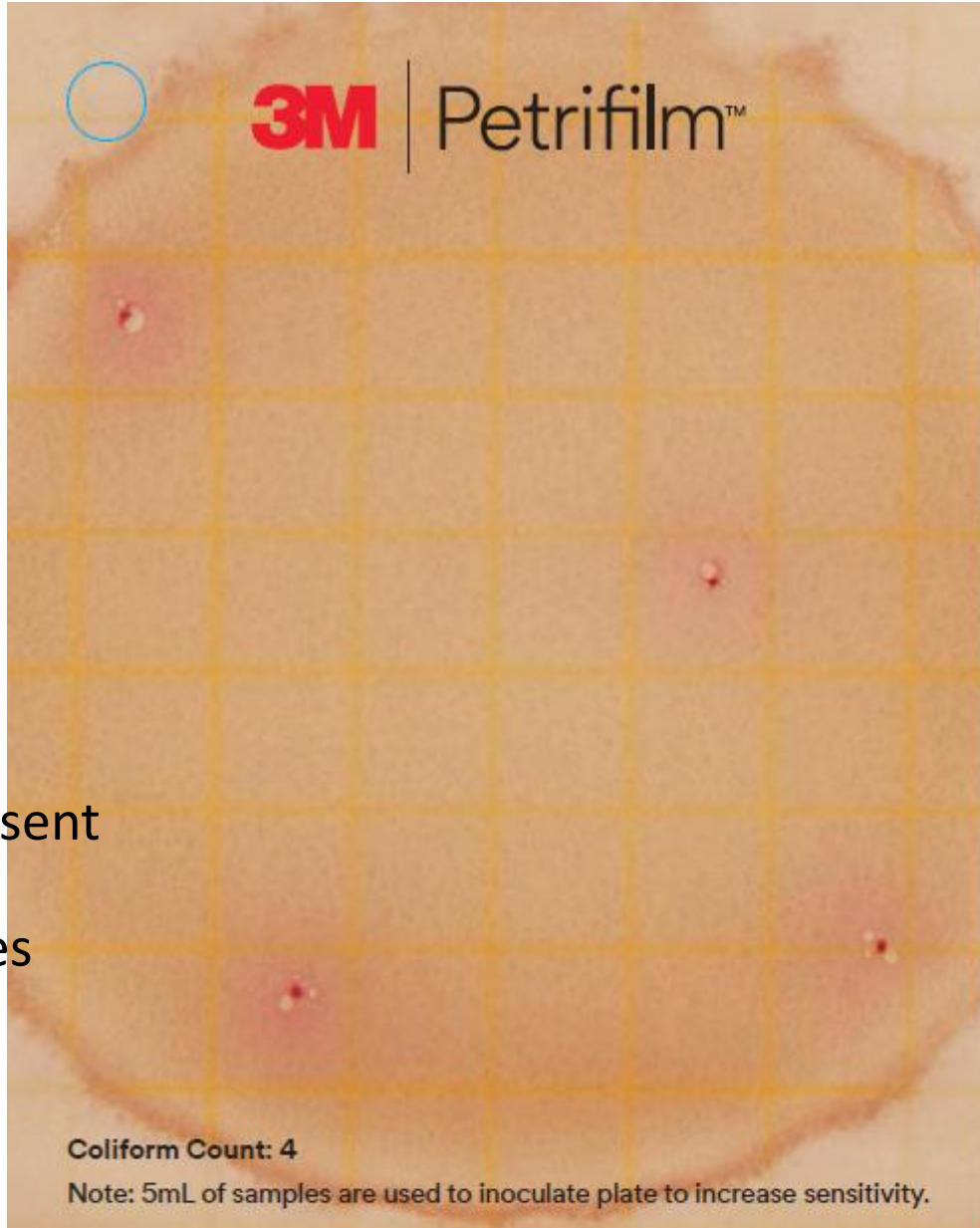
RCC
Rapid Coliform Count Plate



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™	Dairy Products 24h ± 2h at 32°C ± 1°C
NF Validation by AFNOR Certification	Human Food Products 24h ± 2h at 30°C ± 1°C or 37°C ± 1°C
Method	Thermotolerant Coliforms 24h ± 2h at 44°C ± 1°C Incubator humidification is required at this elevated temperature.
Incubation	Stacks of 10 or less
Optimum pH Range	6.5–7.5
Recommended Counting Range	<150 CFU
Counting Area	60cm ²
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

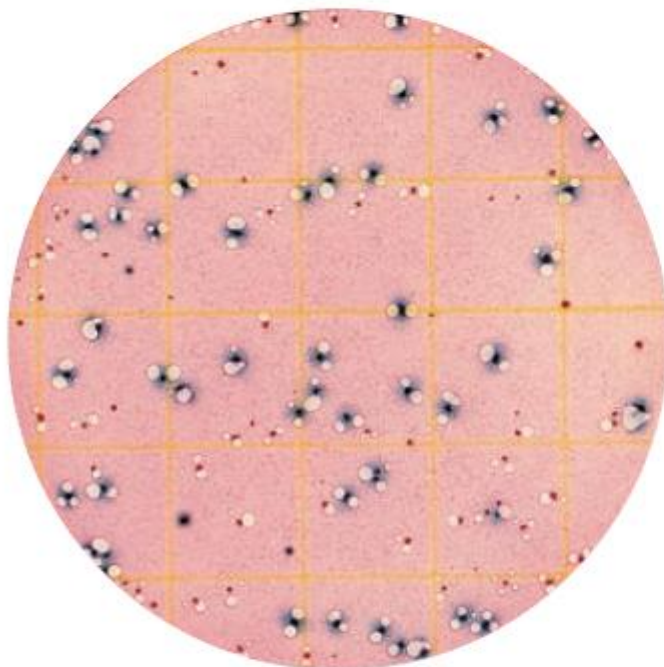


3M™ Petrifilm™

- 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™	Coliform in Foods 24h ± 2h at 35°C ± 1°C E. coli in Foods 48h ± 4h at 35°C ± 1°C Poultry, Meats and Seafood Coliforms and E. coli 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 ²
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

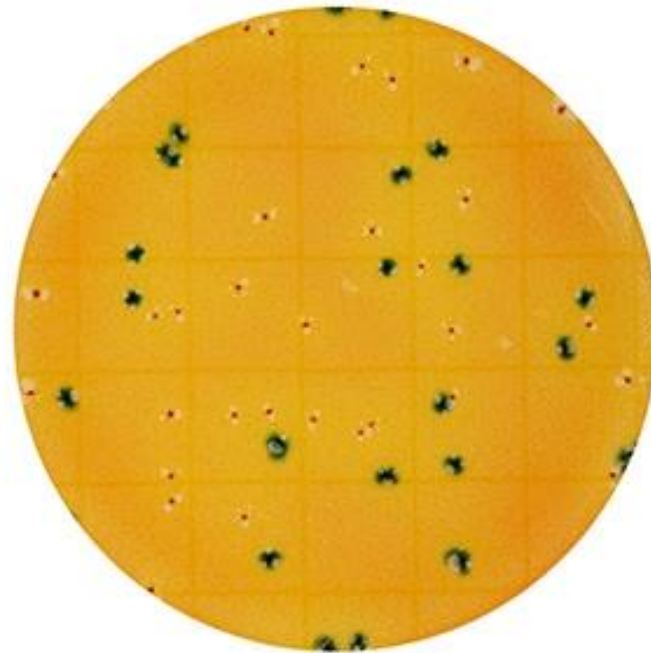


3M™ Petrifilm™

- 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™	Dairy (Not Including Powders) and Seafood 24h ± 2h at 32°C ± 1°C All Other Foods 24h ± 2h at 35°C ± 1°C Dairy Powders Including Whey Powders 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

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REC

Rapid E. coli/Coliform Count Plate



REC

Rapid E. coli/Coliform Count Plate

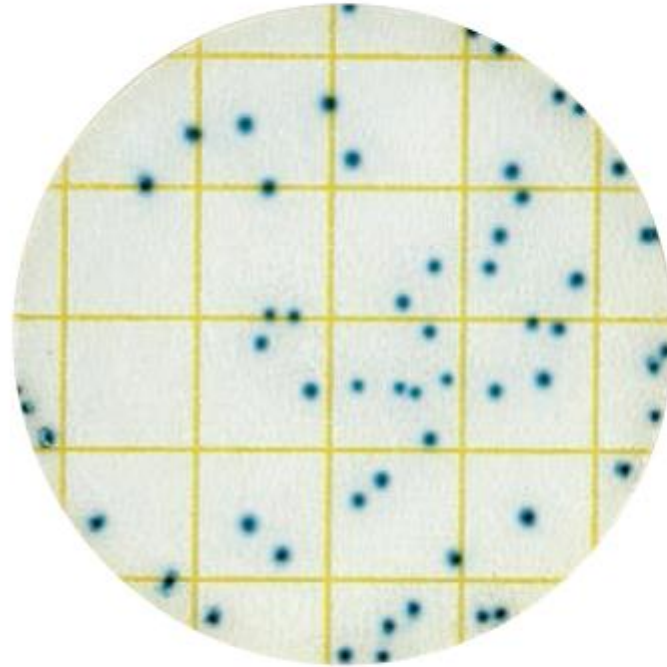




3M™ Petrifilm™

- 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	All Human Food Products, Pet Food and Industrial Environmental Samples 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 ²
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™

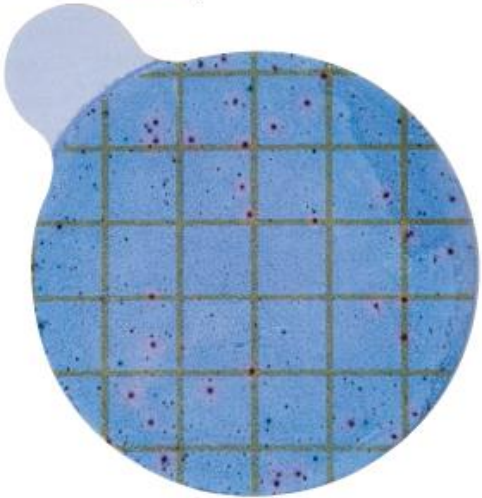
- Staph Express



***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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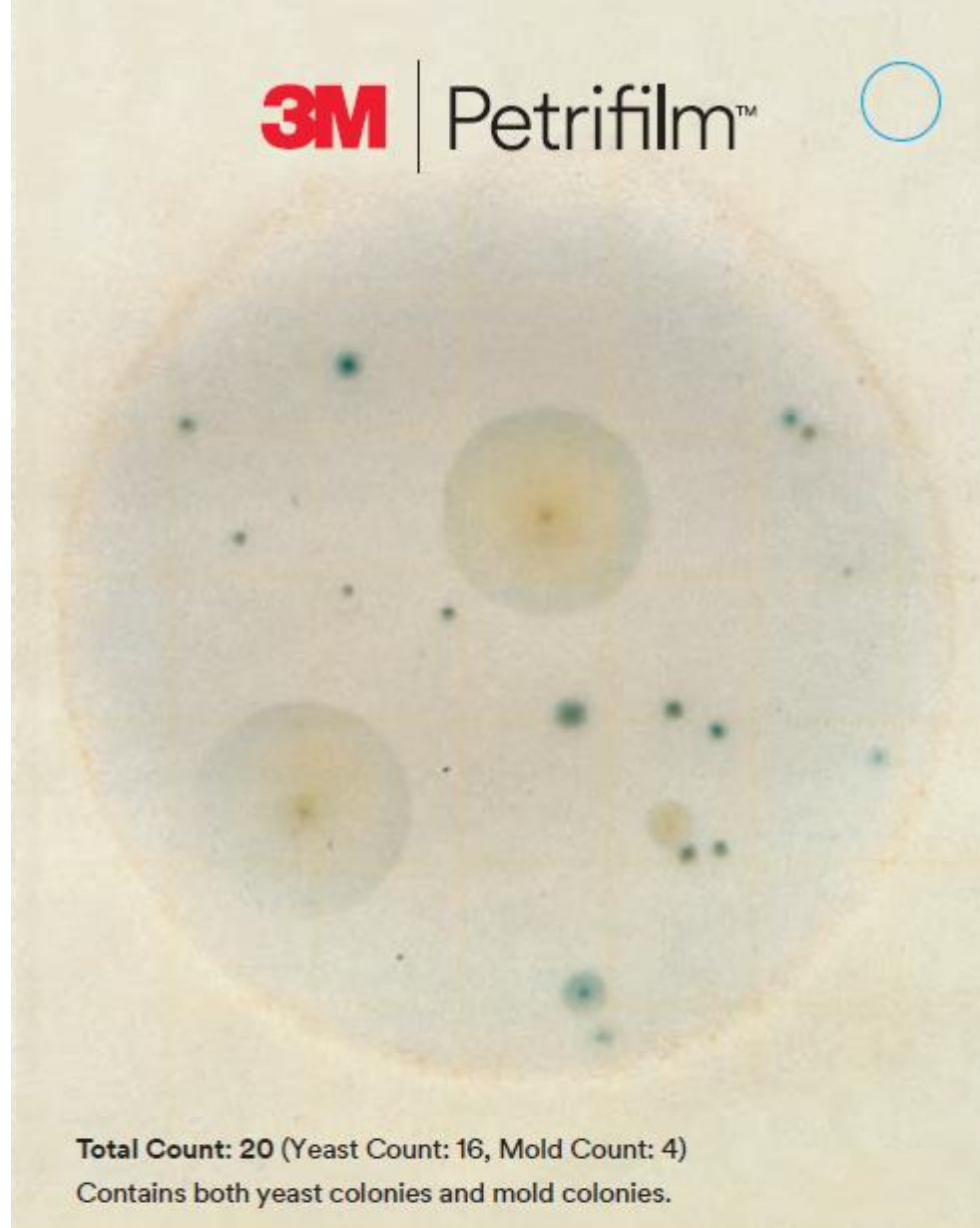
Product Code	Plates 6490 (box of 50 units) 6491 (box of 500 units) Disks 6492 (box of 20 units) 6493 (box of 100 units)
Method: AOAC® Official Method of Analysis™	In Food Plate: 24h ± 2h at 35°C ± 1°C or 37°C ± 1°C Disk: 1–3h at 35°C ± 1°C or 37°C ± 1°C
NF Validation by AFNOR Certification	All Human Food and Pet Food Plate: 24h ± 2h at 37°C ± 1°C Disk: 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 ²
Spreader Type	3M™ Petrifilm™ Flat Spreader

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STX
Staph Express Count Plate

3M™ Petrifilm™

- Levures et Moisissures



YM
Yeast and Mold Count Plate

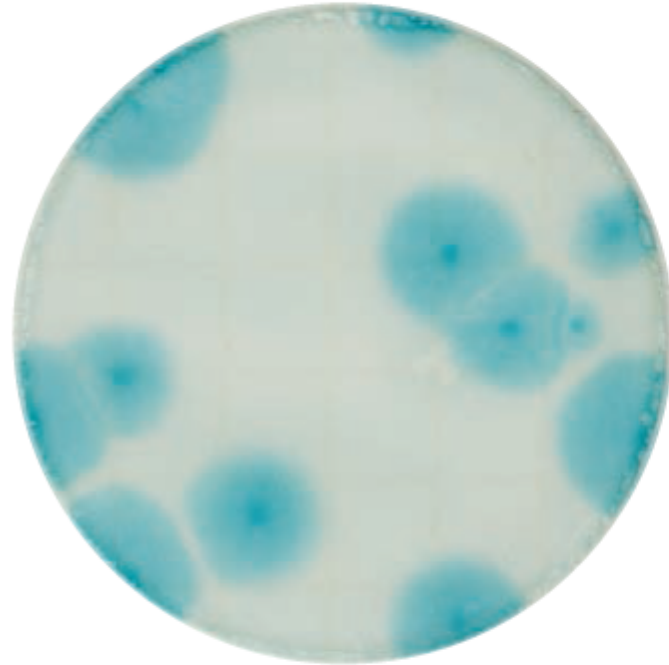
Product Code	6407 (box of 100 units) 6417 (box of 1,000 units)
Method: AOAC® Official Method of Analysis™	Foods 5 days at 20–25°C
Incubation	Stacks of 20 or less
Optimum pH Range	Not Applicable
Recommended Counting Range	<150 CFU
Counting Area	30cm ²
Spreader Type	3M™ Petrifilm™ Yeast and Mold Spreader

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™



- Rapide Levures et Moisissures

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.

Product Code	6475 (box of 50 units) 6477 (case of 500 units)
Method: AOAC® Official Method of Analysis™	Select Foods 48–60h at 25°C ± 1°C or 28°C ± 1°C
NF Validation by AFNOR Certification	All Human Food Products, Animal Feed and Environmental Products (Primary Production Samples Excepted) 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

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.

RYM
Rapid Yeast and Mold Count Plate



RYM
Rapid Yeast and Mold Count Plate



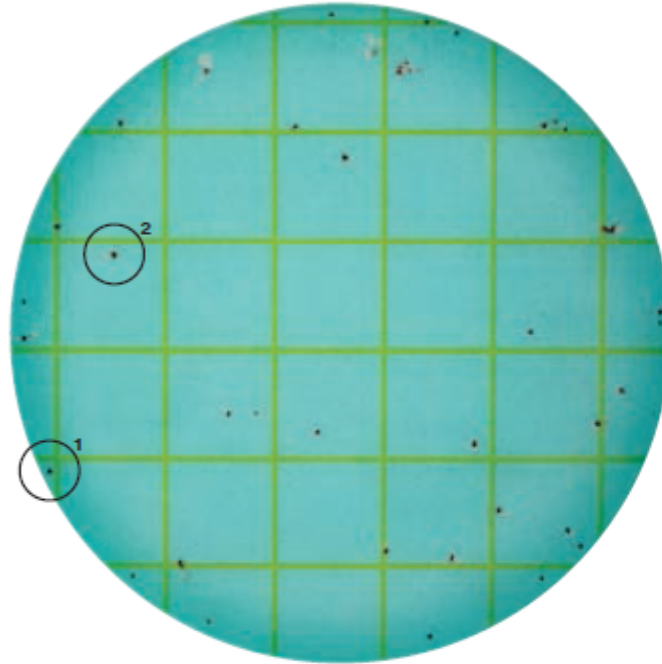
3M™ Petrifilm™

- 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	Foods and Environmental Samples Incubate 48h ± 3h at appropriate temperature between 28–37°C
Incubation	Stacks of 20 or less
Optimum pH Range	Not Applicable
Recommended Counting Range	Colonies Without Gas <300 CFU Colonies With and Without Gas <150 CFU
Counting Area	30cm ²
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?