

3M Food Safety
3M™ Petrifilm™ Plates Reference Guide



Industry
Research
Reference

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3M

About this reference guide

For more than 30 years food safety professionals around the world have trusted 3M™ Petrifilm™ Plates for fast, accurate microbial quantitative testing. These revolutionary, ready-to-use plates have streamlined, standardized and simplified microbial testing and analysis.

This reference guide is a compilation of selected studies from researchers all over the world, who have used 3M Petrifilm Plates to test food products from fruit juices and dairy products to meat, seafood, poultry and processed foods. The studies help prove what most food safety professionals already know: 3M Petrifilm Plates provide consistently accurate results, improve technician productivity and help reduce costs.

For more information about 3M Petrifilm Plates or to request samples, visit 3M.com/foodsafety or call 1-800-328-6553.

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Dairy

3M™ Petrifilm™ Plate Bibliography

Quality of pasteurized milk influences the performance of ready-to-use systems for enumeration of aerobic microorganisms

Beloti, V., et. al.

International Dairy Journal. 2002; 12(5): 413-418.

<http://www.sciencedirect.com/science/article/pii/S0958694602000213>

Petrifilm Plate(s): Aerobic Count
Region: Latin America

Efficacy of 3M™ Petrifilm™ Aerobic Count Plates for Enumerating *Bacillus sporothermodurans* and *Geobacillus stearothermophilus* in UHT Milk

Casillas-Buenrostro, R.M., et. al.

International Dairy Journal. 2012; 25(2): 147-149.

<http://www.sciencedirect.com/science/article/pii/S0958694612000295>

Petrifilm Plate(s): Aerobic Count
Region: Latin America

Enumeration of the contaminating bacterial microbiota in unfermented pasteurized milks enriched with probiotic bacteria

Champagne, C.P., et. al.

Canadian Journal of Microbiology. 2009; 55(4): 410-418.

<http://www.ncbi.nlm.nih.gov/pubmed/19396241>

Petrifilm Plate(s): Aerobic Count
Region: Canada

Evaluation of Petrifilm method for enumerating aerobic bacteria in Crottin goat cheese

de Sousa, G.B., et. al.

Revista Argentina de Microbiologia. 2005; 37(4): 214-216.

<http://www.ncbi.nlm.nih.gov/pubmed/16502643>

Petrifilm Plate(s): Aerobic Count
Region: Latin America

3M™ Petrifilm™ Plate Bibliography—Dairy

With
Abstract
Summary

Comparison of 3M Petrifilm Staph Express Count System with the bacteriological analytical manual direct-plating method for enumeration of *Staphylococcus aureus* in artificially contaminated hard cheese

Fedio, W.M., et. al.

Journal of AOAC International. 2008; 91(5): 1138-1141.

<http://www.ncbi.nlm.nih.gov/pubmed/18980130>

Petrifilm Plate(s): Staph Express Count

Region: United States

The 3M™ Petrifilm™ Staph Express Count System was evaluated in comparison to the USDA BAM direct-plate count method looking for Staphylococcus aureus in Asiago, Cheddar, Gruyère, Parmesan, Romano and Swiss hard cheeses. Results showed no significant difference between the methods and the 3M™ Petrifilm™ System was reviewed as more convenient to use, considerably faster and less expensive to perform.

Enumeration of total bacteria and coliforms in milk by dry rehydratable film methods: collaborative study

Ginn, R.E., et. al.

Journal - Association of Official Analytical Chemists. 1986; 69(3): 527-531.

<http://www.ncbi.nlm.nih.gov/pubmed/3522537>

Petrifilm Plate(s): Aerobic Count, Coliform Count

Region: United States

Enumeration of starter cultures during yogurt production using Petrifilm AC plates associated with acidified MRS and M17 broths

Goncalves, M.M., et. al.

Journal of Dairy Research. 2009; 76(2): 229-233.

<http://www.ncbi.nlm.nih.gov/pubmed/19281634>

Petrifilm Plate(s): Aerobic Count

Region: Latin America

Shedding patterns of *S. aureus* in quarter foremilk samples of cows with known *S. aureus* infections [Ausscheidung und nachweis von *Staphylococcus aureus* über milch aus infizierten milchdrüsenvierteln]

Krömker, V., et. al.

Tierärztliche Praxis Ausgabe G: Grosstiere - Nutztiere. 2008; 36(6): 389-392.

http://www.animalhealth.bayer.com/456.0.html?&no_cache=1&tx_ttnews%5BpS%5D=1328691219&tx_ttnews%5Bpointer%5D=2&tx_ttnews%5Btt_news%5D=1296&tx_ttnews%5BbackPid%5D=425&cHash=f25838d350923d68bebe83635beba4ff

Petrifilm Plate(s): Staph Express Count

Region: Europe

Pathogenic microflora found in white “telita” cheese made in four states of Venezuela [Microflora patógena del queso blanco “telita” elaborado en cuatro estados de Venezuela]

Márquez, J.G., et. al.

Anales Venezolanos de Nutricion. 2007; 20(1): 17-21.

http://www.scielo.org.ve/scielo.php?script=sci_arttext&pid=S0798-07522007000100004&lng=en&nrm=iso&ignore=.html

Petrifilm Plate(s): Staph Express Count, Coliform Count, E. coli/Coliform Count

Region: Latin America

Dairy

Meat, Poultry,
Seafood

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Processed Foods

Fruit & Vegetable

Beverage

Miscellaneous

3M™ Petrifilm™ Plate Bibliography—Dairy

Evaluation of the University of Minnesota Tri-plate and 3M Petrifilm for the isolation of *Staphylococcus aureus* and *Streptococcus* species from clinically mastitic milk samples

McCarron, J.L., et. al.

Journal of Dairy Science. 2009; 92(10): 5326-5333.

<http://www.ncbi.nlm.nih.gov/pubmed/19762850>

Petrifilm Plate(s): Staph Express Count

Region: Canada

Laboratory evaluation of 3M Petrifilms and University of Minnesota Bi-plates as potential on-farm tests for clinical mastitis

McCarron, J.L., et. al.

Journal of Dairy Science. 2009; 92(5): 2297-2305.

<http://www.ncbi.nlm.nih.gov/pubmed/19389988>

Petrifilm Plate(s): Aerobic Count, Coliform Count

Region: Canada

Recovery of lactic acid bacteria on Petrifilm SM under various incubation atmospheres

McGregor, J.U., et. al.

Journal of Food Protection. 1995; 58(3): 316-318.

<http://www.ingentaconnect.com/content/iafp/jfp/1995/00000058/00000003/art00017>

Petrifilm Plate(s): Aerobic Count

Region: United States

Enumeration of bifidobacteria using Petrifilm AC in pure cultures and in a fermented milk manufactured with a commercial culture of *Streptococcus thermophilus*

Miranda, R.O., et. al.

Food Microbiology. 2011; 28(8): 1509-1513.

<http://www.ncbi.nlm.nih.gov/pubmed/21925037>

Petrifilm Plate(s): Aerobic Count

Region: Latin America

Comparison of Petrifilm aerobic count plates and de Man-Rogosa-Sharpe agar for enumeration of lactic acid bacteria

Nero, L.A., et. al.

Journal of Rapid Methods and Automation in Microbiology. 2006; 14(3): 249-257.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1745-4581.2006.00050.x/abstract>

Petrifilm Plate(s): Aerobic Count

Region: Latin America

The enumeration of lactic acid bacteria (LAB) in raw milk was compared with a side by side study of 3M™ Petrifilm™ Aerobic Count (AC) plates and de Man-Rogosa-Sharpe (MRS) agar. Results indicate there is no significance in counts between the two media and the advantages of using 3M™ Petrifilm™ Aerobic Count Plates for a rapid enumeration in aerobic microorganisms can be expanded for enumeration of LAB in foods. The authors also noted the convenience is particularly interesting for testing fermented milk products.

With
Abstract
Summary

3M™ Petrifilm™ Plate Bibliography—Dairy

Evaluation of two alternative techniques for counting mesophilic aerobic bacteria in raw milk

Rosmini, M.R., et. al.

Food Control. 2004; 15(1): 39-44.

<http://www.sciencedirect.com/science/article/pii/S0956713503000057>

Petrifilm Plate(s): Aerobic Count Plate

Region: Latin America

Evaluation of the effect of probiotic cultures on two different yogurt brands over a known population of *Staphylococcus aureus* and the production of thermonuclease [Evaluación del efecto de cultivos probióticos presentes en yogurt sobre *Staphylococcus aureus* y la producción de termonucleasa]

Salvaterra M., et. al.

Archivos Latinoamericanos de Nutricion. 2004; 54(3): 298-302.

<http://www.ncbi.nlm.nih.gov/pubmed/15807205>

Petrifilm Plate(s): Staph Express Count

Region: Latin America

3M Petrifilm Staph Express Count plate method for the enumeration of *Staphylococcus aureus* in selected dairy foods: collaborative study

Silbernagel, K.M., et. al.

Journal of AOAC International. 2003; 86(5): 963-970.

<http://www.ncbi.nlm.nih.gov/pubmed/14632398>

Petrifilm Plate(s): Staph Express Count

Region: United States

Comparison of methods for enumeration of yeasts and molds in shredded low-moisture, part-skim mozzarella cheese

Spangenberg, D.S., et. al.

Journal of Food Protection. 2000; 63(4): 529-533.

<http://www.ncbi.nlm.nih.gov/pubmed/10772220>

Petrifilm Plate(s): Yeast & Mold Count

Region: United States

Performance of two ready-to-use systems for enumeration of aerobic mesophilic microorganisms in frozen goat milk

Tavolaro, P., et. al.

Brazilian Journal of Microbiology. 2005; 36(3): 295-300.

<http://agris.fao.org/agris-search/search/display.do?f=2008/XS/XS0810.xml;XS2005090317>

Petrifilm Plate(s): Aerobic Count

Region: Latin America

Enumeration of coagulase and thermonuclease-positive *Staphylococcus spp.* in raw milk and fresh soft cheese: An evaluation of Baird-Parker agar, Rabbit Plasma Fibrinogen agar and the 3M Petrifilm Staph Express Count System

Vicosa, G.N., et. al.

Food Microbiology. 2010; 27(4): 447-452.

<http://www.ncbi.nlm.nih.gov/pubmed/20417392>

Petrifilm Plate(s): Staph Express Count

Region: Latin America

Meat, Poultry, Seafood

3M™ Petrifilm™ Plate Bibliography



Evaluation of the Petrifilm Rapid Coliform Count plate method for coliform enumeration from surimi-based imitation crab slurry

Chung, K.S., et. al.

Journal of Food Protection. 2000; 63(1): 123-125.

<http://www.ncbi.nlm.nih.gov/pubmed/10643782>

Petrifilm Plate(s): Rapid Coliform Count

Region: Asia

A survey of microbial levels for incoming raw beef, environmental sources, and ground beef in a red meat processing plant

Eisel, W.G., et. al.

Food Microbiology. 1997; 14(3): 273-282.

<http://www.sciencedirect.com/science/article/pii/S0740002096900945>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: United States

Dry rehydratable film method for enumerating confirmed *Escherichia coli* in poultry, meats, and seafood: collaborative study

Gangar, V., et. al.

Journal of AOAC International. 1999; 82(1): 73-78.

<http://www.ncbi.nlm.nih.gov/pubmed/10028673>

Petrifilm Plate(s): E. coli/Coliform Count

Region: United States

Dynabeads™ plus 3M Petrifilm HEC versus Vitek Immunodiagnostic Assay System for detection of *E. coli* O157 in minced meat

Grif, K., et. al.

Letters in Applied Microbiology. 1998; 26(3): 199-204.

<http://www.ncbi.nlm.nih.gov/pubmed/9569709>

Petrifilm Plate(s): E. coli/Coliform Count

Region: United States

3M™ Petrifilm™ Plate Bibliography—Meat, Poultry, Seafood

Comparison of conventional plating methods and Petrifilm for the recovery of microorganisms in a ground beef processing facility

Linton, R.H., et. al.

Journal of Food Protection. 1997; 60(9): 1084-1088.

<http://www.ingentaconnect.com/content/iafp/jfp/1997/00000060/00000009/art00014?crawler=true>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: United States

Evaluation of consumable household products for decontaminating retail skinless, boneless chicken breasts

McKee, L.H., et. al.

Journal of Food Protection. 2005; 68(3): 534-537.

<http://www.ncbi.nlm.nih.gov/pubmed/15771178>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: United States

Evaluation of the Petrifilm plate method for the enumeration of aerobic microorganisms and coliforms in retailed meat samples

Park, Y.H., et. al.

Journal of Food Protection. 2001; 64(11): 1841-1843.

<http://www.ncbi.nlm.nih.gov/pubmed/11726171>

Petrifilm Plate(s): Aerobic Count, Coliform Count

Region: United States

The 3M™ Petrifilm™ Plate method was compared to AOAC aerobic count method and violet red bile agar method for pork, chicken and beef. The performance implies that the 3M Petrifilm Plate method could replace the conventional methods in the analysis of microorganism contamination measurement in meat products. The 3M Petrifilm Plate method was characterized as simpler and less time consuming in sample preparation and in procedures, and faster than conventional methods.

Repeatability of the Petrifilm™ HEC test and agreement with a hydrophobic grid membrane filtration method for the enumeration of *Escherichia coli* O157: H7 on beef carcasses

Power, C.A., et. al.

Journal of Food Protection. 1998; 61(4): 402-408.

<http://www.ncbi.nlm.nih.gov/pubmed/9709201>

Petrifilm Plate(s): E. coli/Coliform Count

Region: Canada

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3M™ Petrifilm™ Plate Bibliography—Meat, Poultry, Seafood

Evaluation of *Escherichia coli* enumeration methods in poultry dishes [Penilaian Kaedah Pengiraan *Escherichia coli* dalam Masakan Ayam]

Rahman, R.D.A., et. al.

Sains Malaysiana. 2012; 41(3): 325-331.

http://www.ukm.my/jsm/english_journals/vol41num3_2012/vol41num3_2012pg325-331.html

Petrifilm Plate(s): E. coli/Coliform Count

Region: Asia

Eleven methods, including 3M™ Petrifilm™ Plates, for Escherichia coli enumeration in poultry dishes were evaluated based on ISO 16140 procedures. Each type of E. coli strains (ATCC 25922, IMR 1/3 107B and IMR E243) were inoculated into five types of poultry dishes to obtain 105 cfu/g bacterial concentration. All methods were comparable in term of accuracy, correlation and relative accuracy. Pour plating, drop plating and 3M Petrifilm Plate methods were more practical than the other eight methods evaluated.

With
Abstract
Summary

Effect of incubation temperature on aerobic plate counts of beef and sheep carcasses

Simmons, J., et. al.

Journal of Food Protection. 2008; 71(2): 373-375.

<http://www.ncbi.nlm.nih.gov/pubmed/18326189>

Petrifilm Plate(s): Aerobic Count

Region: Asia

Enumeration of coliforms and *Escherichia coli* in frozen black tiger shrimp *Penaeus monodon* by conventional and rapid methods

Suwansonthichai, S., et. al.

International Journal of Food Microbiology. 2003; 81(2): 113-121.

<http://www.ncbi.nlm.nih.gov/pubmed/12457585>

Petrifilm Plate(s): E. coli/Coliform Count

Region: Asia

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3M™ Petrifilm™ Plate Bibliography



3M Petrifilm Staph Express Count Plate method for the enumeration of *Staphylococcus aureus* in selected types of meat, seafood, and poultry: collaborative study

McMahon, W.A., et. al.

Journal of AOAC International. 2003; 86(5): 947-953.

<http://www.ncbi.nlm.nih.gov/pubmed/14632396>

Petrifilm Plate(s): Staph Express Count

Region: United States

Comparison of the Baird-Parker agar and 3M Petrifilm rapid *S. aureus* count plate methods for detection and enumeration of *Staphylococcus aureus*

Schoeller, N.P., et. al.

Food Microbiology. 2001; 18(6): 581-587.

<http://www.sciencedirect.com/science/article/pii/S0740002001904320>

Petrifilm Plate(s): Staph Express Count

Region: United States

3M Petrifilm Staph Express Count Plate method for the enumeration of *Staphylococcus aureus* in selected types of processed and prepared foods: collaborative study

Silbernagel, K.M., et. al.

Journal of AOAC International. 2003; 86(5): 954-962.

<http://www.ncbi.nlm.nih.gov/pubmed/14632397>

Petrifilm Plate(s): Staph Express Count

Region: United States

Evaluation of the 3M Petrifilm *Enterobacteriaceae* Count plate method for the enumeration of *Enterobacteriaceae* in foods

Silbernagel, K.M., et. al.

Journal of Food Protection. 2002; 65(9): 1452-1456.

<http://www.ncbi.nlm.nih.gov/pubmed/12233857>

Petrifilm Plate(s): Enterobacteriaceae Count

Region: United States



Fruit & Vegetable

3M™ Petrifilm™ Plate Bibliography

Comparison of Petrifilm method to conventional methods for enumerating aerobic bacteria, coliforms, *Escherichia coli* and yeasts and molds in foods

Jordano, R., et. al.

Acta microbiologica et immunologica Hungarica. 1995; 42(3): 255-259.

<http://www.ncbi.nlm.nih.gov/pubmed/8548198>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count, Yeast & Mold Count

Region: Europe

Evaluation of Petrifilm series 2000 as a possible rapid method to count coliforms in foods

Priego, R., et. al.

Journal of Food Protection. 2000; 63(8): 1137-1140.

<http://www.ncbi.nlm.nih.gov/pubmed/10945593>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: Europe

Efficacy of Petrifilm for the enumeration of the aerobic flora, coliforms and *E. coli* in typical Italian products [Valutazione dei sistemi di analisi microbiologica petrifilm per la conta aerobica totale, coliformi ed *E. coli* in prodotti alimentari Italiani]

Senini, L., et. al.

Industrie Alimentari. 1997; 36(365): 1498-1502.

<http://agris.fao.org/agris-search/search/display.do?f=1998%2FIT%2FIT98016.xml%3BIT1998061489>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: Europe

3M™ Petrifilm™ Plate Bibliography—Fruit & Vegetable

Petrifilm Rapid *S. aureus* count plate method for rapid enumeration of *Staphylococcus aureus* in selected foods: collaborative study

Silbernagel, K.M., et. al.

Journal of AOAC International. 2001; 84(5): 1431-1443.

<http://www.ncbi.nlm.nih.gov/pubmed/11601462>

Petrifilm Plate(s): Staph Express Count

Region: United States

Coliforms at 45°C and comparison of most probable number method and Petrifilm EC for enumeration of total coliforms and *Escherichia coli* of foods [Avaliação do padrão coliformes a 45°C e comparação da eficiência das técnicas dos tubos múltiplos e Petrifilm EC na detecção de coliformes totais e *Escherichia coli* em alimentos]

Silva M.P., et. al.

Ciencia e Tecnologia de Alimentos. 2006; 26(2): 352-359.

http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-20612006000200018&lng=pt&nrm=iso&tlng=pt

Petrifilm Plate(s): E. coli/Coliform Count

Region: Latin America



Beverage

3M™ Petrifilm™ Plate Bibliography

A comparison of ready-to-use systems for evaluating the microbiological quality of acidic fruit juices using non-pasteurized orange juice as an experimental model

Ramazotti-Ferrati, A., et. al.

International Microbiology. 2005; 8(1): 49-53.

<http://www.ncbi.nlm.nih.gov/pubmed/15906261>

Petrifilm Plate(s): Aerobic Count, Yeast & Mold Count

Region: Latin America

This study evaluated the performance of 3M™ Petrifilm™ Plates for the enumeration of total aerobes and fungi (yeasts and molds) in acidic fruit juices, using non-pasteurized orange juice as an experimental model. 3M Petrifilm Plates proved to be good alternative methods for testing the microbiological quality of acidic fruit juices.

With
Abstract
Summary

Comparison of methods for determining coliform and *Escherichia coli* levels in apple cider

Silk, T.M., et. al.

Journal of Food Protection. 1997; 60(11): 1302-1305.

<http://www.ingentaconnect.com/content/iafp/jfp/1997/00000060/00000011/art00001?crawler=true>

Petrifilm Plate(s): High-Sensitivity Coliform Count, E. coli/Coliform Count

Region: United States

*This research determined that the easiest and most reliable media for enumerating coliform bacteria and *Escherichia coli* levels in apple cider are 3M™ Petrifilm™ High-Sensitivity Coliform Count Plates for coliform levels and 3M™ Petrifilm™ E. coli Count Plates for E. coli.*

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Miscellaneous

3M™ Petrifilm™ Plate Bibliography

Evaluation of Petrifilm methods for enumeration of aerobic flora and coliforms in a wide range of foods

Blackburn, C.D.W., et. al.

Letters in Applied Microbiology. 1996; 22(2): 137-140.

<http://www.ncbi.nlm.nih.gov/pubmed/8936373>

Petrifilm Plate(s): Aerobic Count, Coliform Count

Region: Europe

Microbiological validation of a film system for monitoring total anaerobic bacterial pollution on surfaces and operator's overalls in controlled areas [CONVALIDA MICROBIOLOGICA DI UN SISTEMA A FILM PER IL MONITORAGGIO DELLA FLORA BATTERICA AEROBICA TOTALE SU SUPERFICI ED INDUMENTI DI LAVORO IN AREE CONTROLLATE]

Dal maso, G., et. al.

Bollettino Chimico Farmaceutico. 1993; 132(1): 23-28.

<http://www.ncbi.nlm.nih.gov/pubmed/8476553>

Petrifilm Plate(s): Aerobic Count

Region: Europe

Evaluation of dryfilm method for isolation of microorganisms from foods

Ha, S.-D.

Korean Journal of Applied Microbiology and Biotechnology. 1996; 24(2): 178-184.

http://astp.jst.go.jp/modules/search/DocumentDetail/0257-2389%2B%2540%2B1598-642x%2B%2540%2B1598-642x%2B%2540%2B_24_2_N%252FA_%25EC%258B%259D%25ED%2592%2588%25EB%2582%25B4%25EC%259D%2598%2B%25EB%25AF%25B8%25EC%2583%259D%25EB%25AC%25BC%2B%25EB%25B6%2584%25EB%25A6%25AC%25EB%25A5%25BC%2B%25EC%259C%2584%25ED%2595%259C%2Bdryfilm%2B%25EB%25B0%25A9%25EB%25B2%2595%25EC%259D%2598%2B%25ED%258F%2589%25EA%25B0%2580%25EC%2597%25B0%25EA%25B5%25AC

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: Asia

Manual squeezing as an alternative to mechanical stomaching in preparing beef carcass sponge samples for microbiological analysis

Ingham, S.C., et. al.

Journal of Food Protection. 2009; 72(2): 428-430.

<http://www.ncbi.nlm.nih.gov/pubmed/19350993>

Petrifilm Plate(s): Aerobic Count, Coliform Count, Enterobacteriaceae Count

Region: United States

3M™ Petrifilm™ Plate Bibliography—Miscellaneous

Comparison of the Baird-Parker agar and 3M™ Petrifilm™ Staph Express Count Plate methods for enumeration of *Staphylococcus aureus* in naturally and artificially contaminated foods

Ingham, S.C., et. al.

Journal of Food Protection. 2003; 66(11): 2151-2155.

<http://www.ncbi.nlm.nih.gov/pubmed/14627298>

Petrifilm Plate(s): Staph Express Count

Region: United States

Comparison of Petrifilm method to conventional methods for enumerating aerobic bacteria, coliforms, *Escherichia coli* and yeasts and molds in foods

Jordano, R., et. al.

Acta microbiologica et immunologica Hungarica. 1995; 42(3): 255-259.

<http://www.ncbi.nlm.nih.gov/pubmed/8548198>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count, Yeast & Mold Count

Region: Europe

Dry rehydratable film method for rapid enumeration of coliforms in foods (3M™ Petrifilm™ Rapid Coliform Count Plate): collaborative study

Kinneberg, K.M., et. al.

Journal of AOAC International. 2002; 85(1): 56-71.

<http://www.ncbi.nlm.nih.gov/pubmed/11878620>

Petrifilm Plate(s): Rapid Coliform Count

Region: United States

Comparison of the Petrifilm dry rehydratable film and conventional culture methods for enumeration of yeasts and molds in foods: collaborative study

Knight, M.T., et. al.

Journal of AOAC International. 1997; 80(4): 806-811.

<http://www.ncbi.nlm.nih.gov/pubmed/9241844>

Petrifilm Plate(s): Yeast and Mold Count

Region: United States

Evaluation of a dry, rehydratable film method for rapid enumeration of *Staphylococcus aureus*

Mach, P.A., et. al.

Journal of AOAC International. 2000; 83(5): 1096-1107.

<http://www.ncbi.nlm.nih.gov/pubmed/11048850>

Petrifilm Plate(s): Staph Express Count

Region: United States

3M™ Petrifilm™ Plate Bibliography—Miscellaneous

Development of a PCR assay for detection of *Enterobacteriaceae* in foods

Nakano, S., et. al.

Journal of Food Protection. 2003; 66(10): 1798-1804.

<http://www.ncbi.nlm.nih.gov/pubmed/14572216>

Petrifilm Plate(s): Enterobacteriaceae Count

Region: United States

Comparison of 3M Petrifilm Environmental *Listeria* plates against standard enrichment methods for the detection of *Listeria monocytogenes* of epidemiological significance from environmental surfaces

Nyachuba, D.G., et. al.

Journal of Food Science. 2007; 72(9): M346-M354.

<http://www.ncbi.nlm.nih.gov/pubmed/18034727>

Petrifilm Plate(s): Environmental Listeria

Region: United States

Evaluation of Petrifilm series 2000 as a possible rapid method to count coliforms in foods

Priego, R., et. al.

Journal of Food Protection. 2000; 63(8): 1137-1140.

<http://www.ncbi.nlm.nih.gov/pubmed/10945593>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: Europe

Evaluation of Petrifilm EC method for enumeration of *E. coli* from soil

Samarajeewa, A.D., et. al.

Letters in Applied Microbiology. 2010; 50(5): 457-461.

<http://www.ncbi.nlm.nih.gov/pubmed/20184673>

Petrifilm Plate(s): E. coli/Coliform Count

Region: Canada

Evaluation of Petrifilm system for enumeration of aerobic flora, coliforms and *E. coli*. Results of a ring test [Valutazione dei sistemi di analisi microbiologica Petrifilm conta aerobica totale, coliformi ed *E. Coli*. Risultati di uno studio interlaboratorio]

Senini, L., et. al.

Industrie Alimentari. 1999; 38(385): 1117-1120.

<http://agris.fao.org/agris-search/search/display.do?f=2001%2FIT%2FIT01004.xml%3BIT2001060826>

Petrifilm Plate(s): Aerobic Count, Coliform Count, E. coli/Coliform Count

Region: Europe

Dairy

Meat, Poultry,
Seafood

Prepared &
Processed Foods

Fruit & Vegetable

Beverage

Miscellaneous

3M™ Petrifilm™ Plate Bibliography—Miscellaneous

Efficacy of Petrifilm for the enumeration of the aerobic flora-coliforms and *E. coli* in typical Italian products [Valutazione dei sistemi di analisi microbiologica petrifilm per la conta aerobica totale, coliformi ed *E. coli* in prodotti alimentari Italiani]

Senini, L., et. al.

Industrie Alimentari. 1997; 36(365): 1498-1502.

<http://agris.fao.org/agris-search/search/display.do?f=1998%2FIT%2FIT98016.xml%3BIT1998061489>

Petrifilm Plate(s): Aerobic Count, Coliform Count, *E. coli*/Coliform Count

Region: Europe

3M™ Petrifilm™ *Enterobacteriaceae* Count plate method for enumeration of *Enterobacteriaceae* in selected foods: collaborative study

Silbernagel, K.M., et. al.

Journal of AOAC International. 2003; 86(4): 802-814.

<http://www.ncbi.nlm.nih.gov/pubmed/14509441>

Petrifilm Plate(s): Enterobacteriaceae Count

Region: United States

Petrifilm Rapid *S. aureus* Count plate method for rapid enumeration of *Staphylococcus aureus* in selected foods: collaborative study

Silbernagel, K.M., et. al.

Journal of AOAC International. 2001; 84(5): 1431-1443.

<http://www.ncbi.nlm.nih.gov/pubmed/11601462>

Petrifilm Plate(s): Staph Express Count

Region: United States

Coliforms at 45°C and comparison of most probable number method and Petrifilm EC for enumeration of total coliforms and *Escherichia coli* of foods [Avaliação do padrão coliformes a 45°C e comparação da eficiência das técnicas dos tubos múltiplos e Petrifilm EC na detecção de coliformes totais e *Escherichia coli* em alimentos]

Silva, M.P., et. al.

Ciencia e Tecnologia de Alimentos. 2006; 26(2): 352-359.

http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-20612006000200018&lng=pt&nrm=iso&tling=pt

Petrifilm Plate(s): *E. coli*/Coliform Count

Region: Latin America

3M™ Petrifilm™ Plate Bibliography—Miscellaneous

With
Abstract
Summary

Volunteer monitoring of *E. coli* in streams of the upper Midwestern United States: A comparison of methods

Stepenuck, K.F., et. al.

Environmental Monitoring and Assessment. 2011; 174(4-Jan): 625-633.

<http://www.ncbi.nlm.nih.gov/pubmed/20454848>

Petrifilm Plate(s): E. coli/Coliform Count

Region: United States

This study evaluated two E. coli monitoring methods, Coliscan Easygel and 3M™ Petrifilm™ Plates to compare to the results of the EPA-approved laboratory analyses. 3M Petrifilm Plates results were more related to the laboratory analyses than Coliscan Easygel. Both test methods had comparable overall accuracy of predicting if a sample exceeded or fell below the 235 cfu/100 mL EPA body contact standard for recreational surface waters but two-thirds of volunteers favored 3M Petrifilm Plates.

Enumeration of *Staphylococcus aureus* using CHROMagar and Petrifilm plates [Quantitative Bestimmung von *Staphylococcus aureus* mittels CHROMagar™ und Petrifilm]

Wichmann-Schauer, H., et. al.

Fleischwirtschaft. 2004; 84(6): 120-123.

<http://cat.inist.fr/?aModele=afficheN&cpsidt=15862414>

Petrifilm Plate(s): Staph Express Count

Region: Europe

With
Abstract
Summary

Comparative evaluation of the association among enumeration methods and production of enterotoxins in food-derived *Staphylococcus aureus*

Zhang, C., et. al.

Journal of AOAC International. 2012; 95(1): 105-110.

<http://www.ncbi.nlm.nih.gov/pubmed/22468348>

Petrifilm Plate(s): Staph Express Count

Region: Asia

The morphological enumerations of food-derived S. aureus and production of SEs using different methodologies was evaluated and the 3M™ Petrifilm™ Staph Express Count Plate displayed better performance for the enumeration of SE-positive S. aureus when compared with BP, including higher frequencies of SE-positive isolates and better correlation indices between typical and SE-positive counts. Among all the evaluated culture media, no significant difference ($P > 0.05$) was shown on the frequencies of typical colonies that carried 11 individual SE genes. This study will be important for the selection of methods for inspection of food-derived S. aureus.

Dairy

Meat, Poultry,
Seafood

Prepared &
Processed Foods

Fruit & Vegetable

Beverage

Miscellaneous



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