



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Enumeration of Coliform/*E. coli* Petrifilm™

Method Number: LI-00.738

Scope of Application: Raw materials, line samples and finished products.

Description: EC-Petrifilm™ is a method which is used for the enumeration of coliforms and *E. coli*. Its main feature is to combine the enumeration of both coliforms and *E. coli*. After incubation at 37°C for 24 hours coliforms (gas producing colonies) are enumerated and after an additional 24 hour incubation step *E.coli* is enumerated. The sensitivity is equal to ten *E. coli* and/or coliforms per g of food product (10 cfu/g). However, this method does not detect *E. coli* O157:H7.

**Sample Weight
Required:** 25 g

Method Reference: ISO method 4831 and AOAC, BAM

Analytical Platform: 3M Petrifilm™

Special Information: Enumeration of coliforms or *E. coli* in chocolate and cocoa-based food matrices may not be feasible unless the sample is sufficiently diluted. This is due to a strong coloration of the Petrifilm™ surface area. Additionally, this test is not appropriate for high acid samples and spices.

Petrifilm™ is not applicable when enzymes like amylase or mannanase are used to improve dissolution of cereal, thickener or flour products, or if the sample contains *Bacillus* liquefying the gel in the Petrifilm™.



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Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Coliform Result		CFU/g	<10/g	
Coliform Result (Environmental)		CFU/swab	<10 CFU/swab (q-tip/stick) <100 CFU/swab (sponge)	
Coliform Result (Environmental)		CFU/mL	<1 CFU/mL	
<i>E. coli</i> Result		CFU/g	<10/g	
<i>E. coli</i> Result (Environmental)		CFU/swab	<10 CFU/swab (q-tip/stick) <100 CFU/swab (sponge)	
<i>E. coli</i> Result (Environmental)		CFU/mL	<1 CFU/mL	