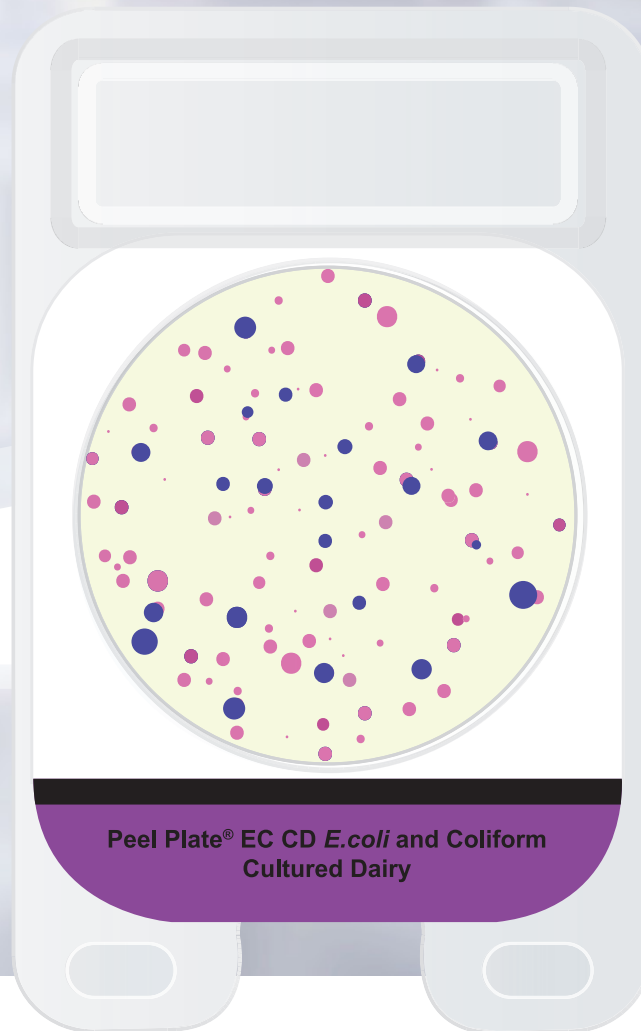


Formulated for Cultured Dairy



For Cultured Dairy



Interpretation Guide

An introduction to using and interpreting results for Peel Plate® EC Microbial Tests for cultured dairy.



Introduction - Cultured Dairy

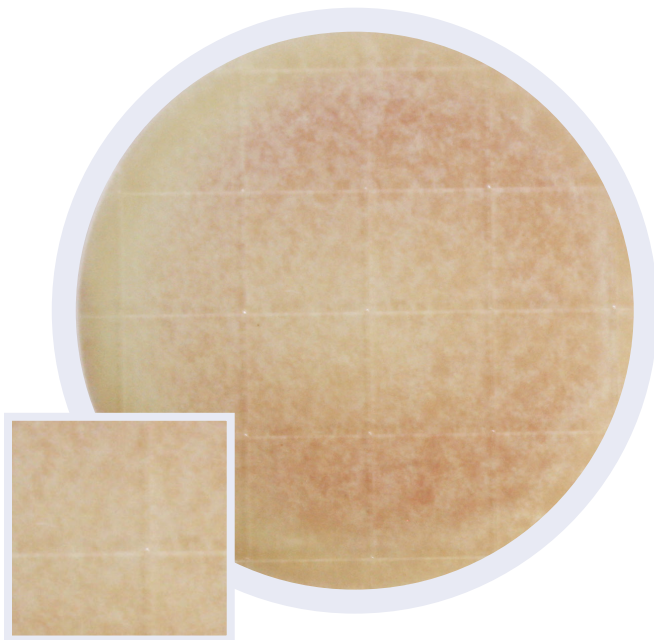
The Peel Plate® EC Microbial Test for Cultured Dairy diffuse the prepared/homogenized/diluted sample in media that contains selective agents and dyes designed for the determination of total coliform in dairy when incubated at 32 °C. Generic *E. coli* are blue/purple/green colonies while coliform are red.

Since coliform ferment lactose, they have the ability to break down the enzyme substrate, salmon-gal, through the production of β -galactosidase, producing a red color. Generic *E. coli* produce β -glucuronidase which acts on x-glucuronide resulting in a blue colony.

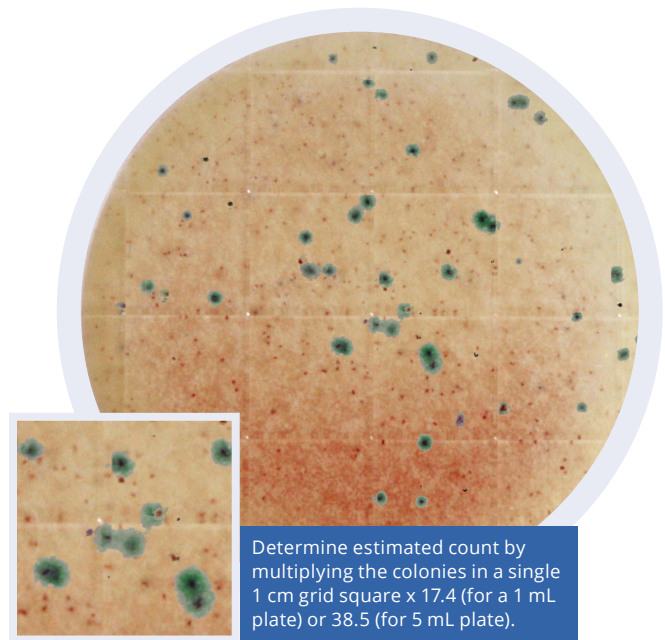
- **Sensitivity:** >1 CFU/mL of test sample
- **Accurate quantitative range:** 1 to 154 CFU/mL
- **Incubation:** 24 \pm 2 hours at 32 °C

What You Can Expect to See

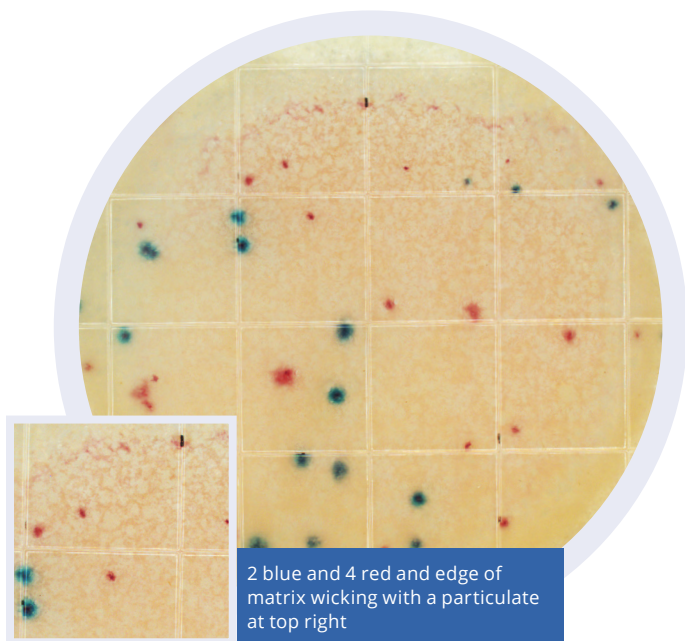
Cultured Dairy products like yogurt, cottage cheese, sour cream, and cheeses may have culture enzymes that react with the growth indicator in the Peel Plate EC test and cause a red background. A specific test formulation should be used to detect coliform and *E. coli* in 24 hours in these cultured dairy products.



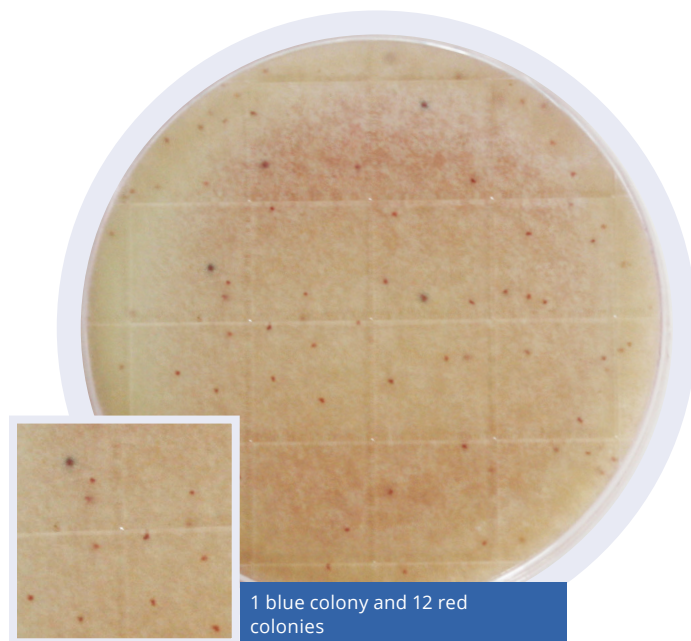
0 Colonies (No Growth)



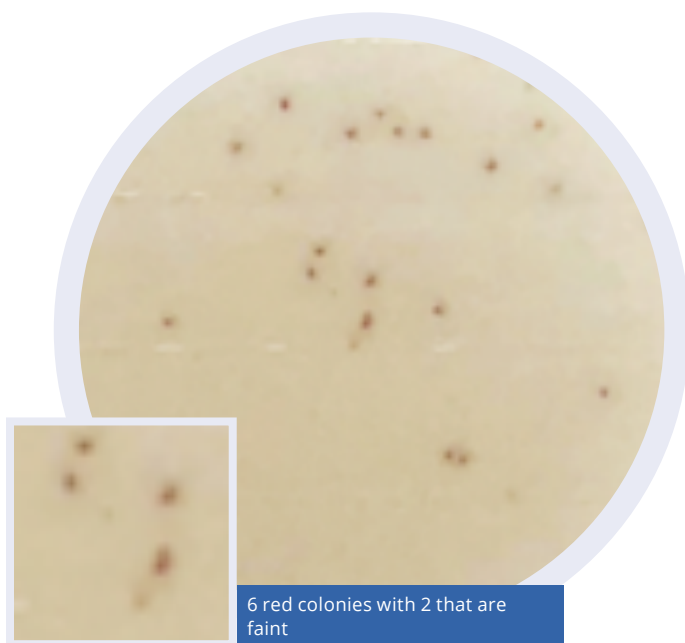
TNTC (Too Numerous to Count)



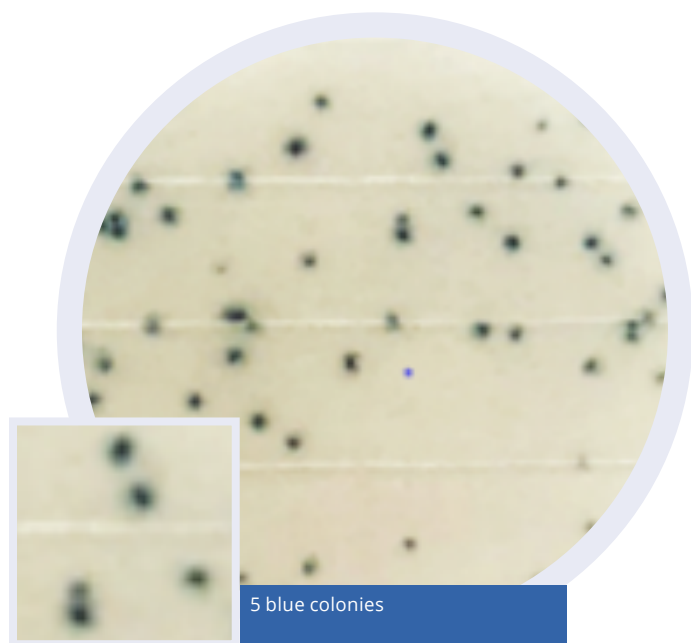
**35 Colonies; 15 Blue and 20 Red
(Sour Cream)**



**70 Colonies; 4 Blue and 66 Red
(Cottage Cheese)**



**22 Colonies; 0 Blue and 22 Red
(Greek Yogurt)**



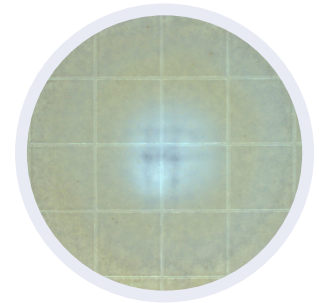
**46 Colonies; 46 Blue and 0 Red
(Cheddar Cheese)**



General Troubleshooting

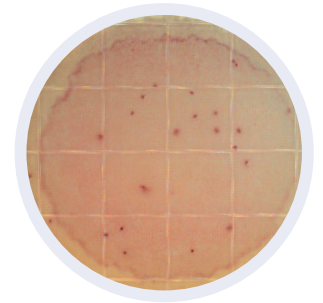
Craters or Incomplete Wicking

Craters are formed when the sample is dispensed too slowly or the pipette is held too far away from the media. Samples should be dispensed within 2-3 seconds and the pipette should be held 1-2 cm above the media. Although incomplete wicking does not effect counts, best practice is to make sure the sample wicks evenly across the plate. If your sample is too viscous to wick completely, you may need to dilute the sample further, or assist the wicking by lifting and rocking the plate. For more information on wicking, please contact Charm Technical Services.



Matrix Edge and Non-wicking

Many homogenates of cheese are thick and may wick slowly or may not wick completely. This can cause an appearance where the top is not completely absorbed with the matrix colloids creating an inner bullseye pattern. To avoid this effect, allow the prepared sample to settle for 30-60 seconds before plating. Pipet rapidly into the center of the plate and assist distribution of sample by lifting and rocking the plate so that it comes in contact with all edges before sample absorbs.



Interference

Some matrices may produce interferences that are reddish development on edges that are not formed into round colonies or perimeter edge growth as seen in this cottage cheese, which is non-coliform interference from high non-culture bacteria.

