3M™ *Petrifilm*™

Sampling of meat carcasses

Preparation for Testing:

1. Wash hands well with a sanitising solution.
2. Write date and carcass number on the bag.

3. Open bag along perforation at top of bag.

4. Pull white tabs apart to open bag.

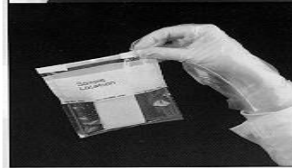
5. Add 10mL Butterfields solution (or accepted diluent) to the bag to rehydrate sponge. Label bottle and sponge bag so can match for later addition of remaining solution.

Sponge Swabbing:

6. Place sterile glove on the hand used to take sponge swab.
7. Move sponge up inside bag, squeeze excess solution and take sponge swab out of bag with sterile hand.
8. Using a sterile template each time (ie different template or one cleaned with 70% alcohol to prevent cross-contamination), swab the flank carcass surface - 100cm^2 to be swabbed.

9. Swab in an up-down direction ten (10) times and then left-right direction ten (10) times.
10. Turn swab over and repeat Steps 8 & 9 but on the brisket carcass surface.
11. Place sponge back into bag.

12. Whirl bag shut and fold yellow tabs to form leakproof seal.



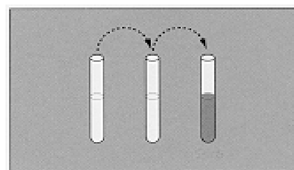
13. Store bag at 4°C until ready to test.

Plating Onto *Petrifilm*:

14. On the *Petrifilm* plate, write date of sampling, any identifying information and dilution used.
15. Add the remaining 15mL Butterfields solution from matching labelled bottle.

16. Ensure solution and swab well mixed by squeezing bag several times.
17. Draw-up 1mL of liquid from sample bag into a sterile pipette.
18.

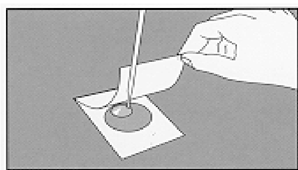
Aerobic Plate Count: due to possible high counts, dilutions series are recommended. Take 1mL of sample and add to 9mL of diluent (use same diluent as in rehydrating sponge). Take 1mL from this diluted sample and add to another 9mL of diluent.



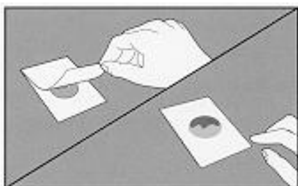
E. coli: dilutions may not be necessary as "Too Numerous To Count" would indicate a serious problem. Dilutions may be done if an accurate count is desired using step fro Aerobic Plate.

19. Working on a clean flat surface, draw-up 1mL of sample liquid into a sterile pipette.

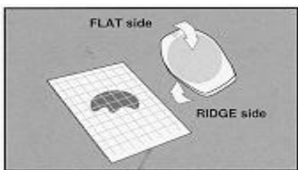
20. Lift the top film of the plate and pipette the 1mL of sample onto the centre of the bottom film.



21.
<u>Aerobic Plate Count:</u> Release the top film down, trapping the "puddle" of diluent between the two films.
<u>E. coli:</u> Roll the top film down (do not drop down), trapping the "puddle" of diluent between the two films - ensure no bubbles are introduced.



22. Place the plastic spreader on the top film above the diluent, and gently push down on the "puddle" to form a 20cm^2 circular spread of diluent between the films. **Note:** for E. coli plates use the spreader with the flat face downwards.



23. Using the same sample liquid, repeat Steps 20 to 23 to carry out duplicate tests.

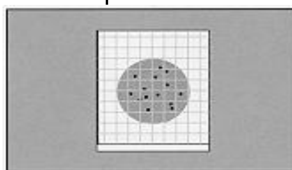
24. Plates maybe stacked in lots of 20.

25. Incubate the plates for the appropriate time (24-48 hours) and temperature (35°C).

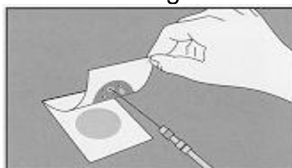
26. Wash your hands well with a sanitising solution when completed.

Counting Results:

27. Use the interpretation guide to count bacteria on the plates.



28. If desired, colonies may be isolated for further identification; lift top film and pick the colony from the gel on the top sheet.



29. Divide count by 8 since 2 areas swabbed (or by 12 if rump swabbed as well). Ensure to account for any dilutions. If tests are done in duplicate, add the 2 test results and halve.

Disposal of Used Plates:

After counting colonies and recording results, used plates should be sealed in a plastic bag and autoclave, incinerated or taken away by a recognised sanitary waste disposal service.

Each colony growing on a plate represents virtually millions of bacteria, with some possibly pathogenic, controlled access to incubating plates, and so the secure disposal of used plates is very important.

Technical Advice:

For any advice on using the *Petrifilm* plates, how to plan your testing program or interpreting results, please do call us.

Orders:

As well as the *Petrifilm*, we can supply any of the accessories mentioned above as well as -
Sterile diluent solutions, Sterile pipettes, Swabs, Stomacher, Blender bags, Autoclave tape - anything to help.
We also supply thermometers, non-glass pH meters, and a range of hygiene/sanitation training tools.

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