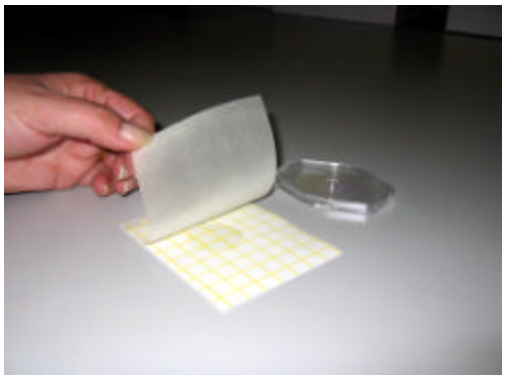
Sampling Methods for Petrifilm™ Count Plates

"a world of learning"

Petrifilm count plates consist of a layer of dehydrated culture medium on a base plate that is covered with a clear protective film. The growth medium becomes active once it has been rehydrated and gelled.



Petrifilm Aerobic Count Plate showing the clear protective film over the base plate that is coated with a layer of dehydrated culture medium.

In many cases, the sample to be tested is in liquid form and may be introduced directly to the plate. For example, tests on beverages such as milk and orange juice can be performed by aseptically transferring 1mL directly to a Petrifilm plate.

For solids, the sample can be mixed with sterile diluent to extract micro-organisms into the liquid, which can then be transferred to a Petrifilm plate for testing. For example, meat and fruit can be treated this way. Remember to scale the result to take into account the dilution factor.

In order to test surfaces for the presence of micro-organisms, there are two approaches that can be used. One method is to swab an area, and then to extract the swab with sterile liquid that can be tested. After scaling for the volume of liquid used, the result can be expressed as the number of colony forming units (cfu) per unit area. For irregular surfaces, it is convenient to speak in terms of the number of cfu per object, e.g. tap, door handle, switch, hand. The 3M Quick Swab™ (M6432) is a self-contained ready-to-use surface swab system. Otherwise, you can use a sterile cotton wool or rayon swab held with sterile forceps.

Smooth surfaces such as bench tops, floors and the like can be tested by direct contact with Petrifilm plates. In order to activate the plates, they need to be rehydrated with 1mL of sterile diluent before contact. Rehydrated plates should be allowed to gel for at least one hour, but can be stored under refrigeration for up to a week before being used to test a surface.

Rehydrated plates may also be used to test for the presence of micro-organisms in the air. Remember to take into account the fact that *two* surfaces of the plate are exposed when expressing the test result.

For further information on using Petrifilm count plates, please refer to the Experiment Manual and the support materials developed for each of the Petrifilm products. These are available on our web site at www.southernbiological.com or contact us if you would prefer to discuss anything in person.

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