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3M™ Petrifilm™ Plates

Environmental Monitoring Procedures

The 3M™ Petrifilm™ plates are a convenient and reliable way to detect environmental microbial contamination. The construction of Petrifilm plates allows them to be used for direct contact or swab contact monitoring procedures, as well as air sampling procedures.

HYDRATION* PROCEDURES FOR AIR OR DIRECT CONTACT METHODS

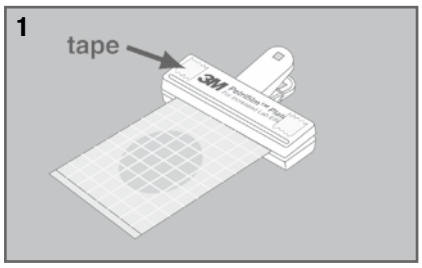
Petrifilm Plate	Procedure	Hydration*
Coliform Count Aerobic Count E. coli/Coliform Count Rapid Coliform Count Enterobacteriaceae Count	Air or Direct Contact Method	Hydrate plates with 1 mL of appropriate sterile diluent. Allow hydrated plates to remain closed for a minimum of 1 hour before use.
Staph Express Count	Air or Direct Contact Method	Hydrate plates with 1 mL of appropriate sterile diluent. Refrigerate hydrated plates for a minimum of 3 days before using.
Yeast and Mold Count	Air Method Only	Hydrate plates with 1 mL of appropriate sterile diluent. Allow hydrated plates to remain closed for a minimum of 1 hour before use.
Yeast and Mold Count	Direct Contact Method Only	Hydrate yeast and mold plates with 1 mL of sterile **letheen broth only**. Place letheen inoculated plates into sealed bag and incubate at 30-37°C (86-99°F) for 24 hours. After incubation, store sealed bag of plates in refrigerator for a minimum of 4 hours to allow gel to solidify. Petrifilm plates hydrated with letheen will have a mottled appearance.

Hydrated Plates Storage Procedures

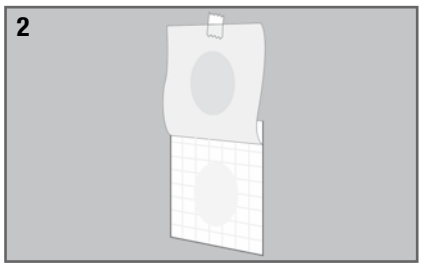
Store all hydrated Petrifilm plates in sealed pouch or plastic bag. Protect plates from light and refrigerate at 2-8°C (36-46°F). Hydrated Petrifilm Aerobic Count plates may be refrigerated up to 14 days, all other hydrated Petrifilm plates may be refrigerated up to 7 days.

* See relevant Petrifilm plate package insert for details and listing of appropriate diluents. If sanitizers are present, use letheen broth for both the direct contact and swab contact methods.

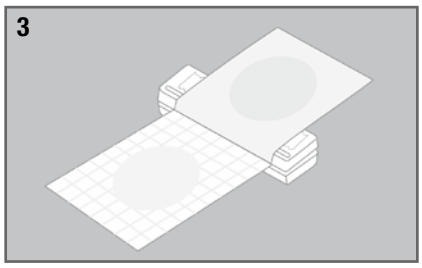
AIR SAMPLING METHOD



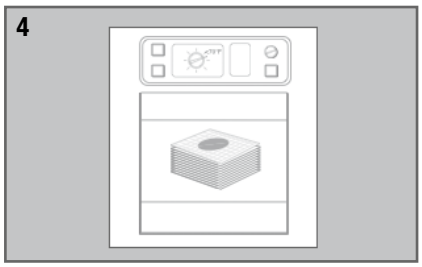
Use a Petrifilm plate clip in combination with double-sided tape. Position hinged edge of hydrated Petrifilm plate into clip. Apply a small piece of double-sided tape to each end of the clip handle.



Double-sided tape can be used with or without clip for vertical positioning of Petrifilm plates for air sampling. Expose Petrifilm plate to air for no longer than 15 minutes. Remove tape and rejoin the top and bottom films.



Without touching circular growth area, lift top film portion of hydrated plate and peel back until outer portion of film adheres to the tape. Make sure top film lies flat across clip.



Incubate and enumerate as directed in package inserts. Refer to 3M Petrifilm Plate Interpretation Guide when enumerating results.

Air Sampling Method Results

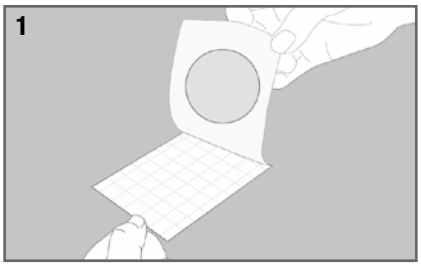
Petrifilm plate results is count/ **40 cm²** for:

- Aerobic Count
- E.coli/Coliform Count
- Enterobacteriaceae Count
- Coliform Count
- Rapid Coliform Count
- Select E. coli Count

Petrifilm plate result is count/ **60 cm²** for:

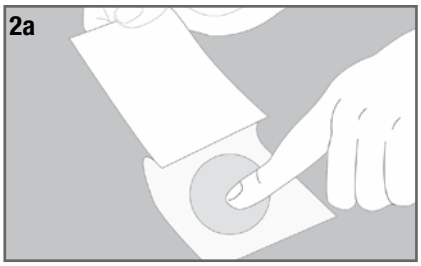
- Yeast & Mold Count
- Staph Express Count

DIRECT CONTACT METHOD



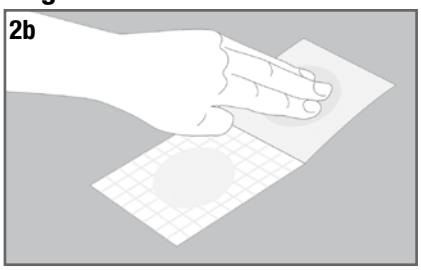
Using a hydrated Petrifilm plate, carefully lift top film. Avoid touching circular growth area. Gel will adhere to top film. Go to step 2a for the surface method or 2b for the finger method.

Surface



Allow the circular gel portion of the top film to contact the surface being tested. Gently rub fingers parallel to the surface over the outer film side of the gelled area to ensure good contact with surface. Rejoin the top and bottom films.

Finger



Touch finger or portion of hand to hydrated gel area. Rejoin the top and bottom films. Wash hands after finger or hand plating.

Petrifilm Yeast and Mold Count Plates

On occasion, the gel may split (adhering to both the top and bottom films) when the top film is lifted. If this happens, the plate with gel splitting may still be used for air testing, but is not recommended for direct contact use.

All Petrifilm plates except Yeast and Mold Count plates and the High-Sensitivity Coliform Count plates can be used for finger or hand plating.

Direct Contact Method Results

Result is count/**20 cm²** for:

- Aerobic Count
- Coliform Count
- Enterobacteriaceae Count
- E.coli/Coliform Count
- Rapid Coliform Count
- Select E. coli Count

Petrifilm plate result is count/**30 cm²** for:

- Yeast & Mold Count
- Staph Express Count

SWAB CONTACT METHOD

Any standard swabbing techniques or swab rinse procedures may be used with Petrifilm plates. However, the rinse solution used must be compatible with the Petrifilm plates. After the area has been swabbed, break off the swab head into the rinse solution and replace cap. Shake vial containing swab head vigorously for 10 seconds. Inoculate Petrifilm plates with 1 ml of solution. Incubate and enumerate as directed in package inserts.

3M

Food Safety

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