



## Filter Choice for 3M™ Petrifilm™ Aqua Plates

3M™ Petrifilm™ Aqua Plates are sample-ready media plates used in the microbial testing of bottled water. Each plate contains a water-soluble gelling agent, nutrients and indicators in a dry, shelf-stable format. This technical bulletin addresses the use of filters with 3M Petrifilm Aqua Plates.

3M Petrifilm Aqua Plates can be used for testing bottle water samples using the membrane filtration method. Mixed cellulose ester (MCE) filters should be used with 3M Petrifilm Aqua plate methods. All validation data for 3M Petrifilm Aqua Plate methods was generated using MCE filters.

Mixed cellulose ester filters are comprised of a mixture of cellulose nitrate (nitrocellulose) and cellulose acetate fibers, typically in a 9:1 ratio. Several manufacturers offer MCE filters with 0.45 µm pore size, and 47 mm diameter - the format generally used for testing in the bottled water industry.

Mixed cellulose ester filters made by different manufacturers, may vary slightly in their appearance on 3M Petrifilm Aqua Plates, due to differences in manufacturing processes. Differences in appearance on 3M Petrifilm Aqua Plates may include the intensity of the colony color, or the background color of the filter on the plate.

Organism recovery on 3M Petrifilm Aqua Plates was similar - regardless of MCE filter used.

There are additional cellulose ester filters available on the market other than MCE filters, including products that consist solely of cellulose acetate or cellulose nitrate (nitrocellulose) material. Due to variable recovery on some of the Petrifilm Aqua Plates, *the use of cellulose acetate or cellulose nitrate filters with Petrifilm Aqua Plates is not recommended.*

There are numerous other types of filters other than cellulose-based filters, including polycarbonate, polyethersulfone, nylon, etc. These filters have not been verified for use with 3M Petrifilm Aqua Plates.

3M Petrifilm Aqua Plates have not been tested with all possible bottled water samples, testing protocols, filters, or strains of microorganisms. The use of 3M Petrifilm Aqua Plates to test water samples is at the sole discretion and responsibility of the end-user.

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