Smart Notes

Does laboratory filtration of culture media affect cell growth?

Laboratory filtration of culture media does not affect cell growth when the correct filter device and membrane are used. Vacuum filter units and bottle top filters come with a number of different membranes. The recommended membrane for filtering cell culture media is an aPES (asymmetric polyethersulfone), available in Thermo Scientific™ Nalgene™ Rapid-Flow™ Filters because of its low protein binding, low extractables and high reliability. Additionally, Nalgene Rapid-Flow Filters have a unique membrane support plate design that enables more consistency and greater performance through lower clogging and faster flow rates.

Why consider using Nalgene Rapid-Flow Filters?

Sterile filtration of media effectively reduces contamination during culture

Filtration is sometimes ignored for fear of removing critical media components or adding deleterious compounds during the process. A proven, high quality filter provides the necessary protection against contamination without compromising media quality.

The aPES membrane is reliable and trusted

The aPES membrane in Nalgene Rapid-Flow Filter does not diminish the important growth factor, leukemia inhibitory factor (LIF), in the media nor does it affect the growth kinetics of the cells (Figures 1 and 2).

The Nalgene Rapid-Flow Filter unit provides superior flow rates

The unique design of Nalgene Rapid-Flow Filters helps to ensure maximum use of the membrane, reducing the risk of premature clogging and resulting in increasing the filtration flow rate by 20-25% when compared to other brands (Figure 3).

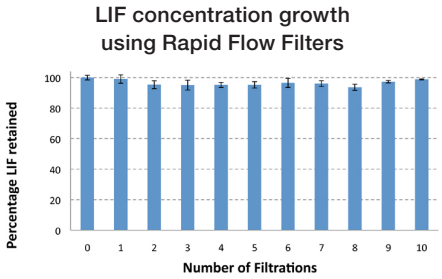

Figure 1. Filtration using Nalgene Rapid-Flow aPES filters did not significantly affect LIF concentration in mouse embryonic stem cell growth media.

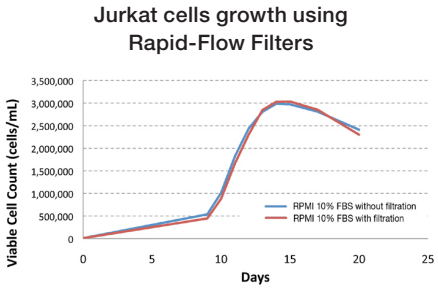

Figure 2. Filtering of RPMI media containing 10% Fetal Bovine Serum (FBS) using Nalgene Rapid-Flow aPES filters did not change the growth kinetics of Jurkat cells.

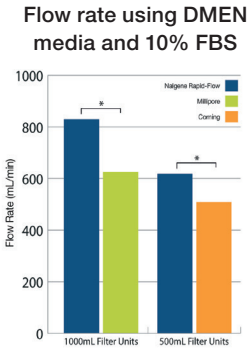

Figure 3. Filtration of DMEM media containing 10% FBS is faster with Nalgene aPES filter units (*p<0.05).

Summary

Media filtered through Nalgene Rapid-Flow Filters maintain growth factor and support normal cell growth and morphology, making them a safe solution for providing sterility in cell cultures.

Find out more at **thermofisher.com/rapidflow**

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