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Product Information

ANTIFOAM O-60 Molecular Biology Reagent

Product No. **A 7957**

Store at room temperature

Product Description

The effectiveness of an antifoam is culture- and medium-dependent. An antifoam that allows good growth of one microorganism may cause inhibition of the growth of a different species of microbe. Some microorganisms produce significant quantities of extracellular proteins or biosurfactants, both of which can contribute to media foaming. These extracellular by-products are often produced during the latter stages of the fermentation. The medium can contribute to foaming by containing components that stimulate the production of extracellular proteins or biosurfactants by the microorganisms being grown. The composition of the growth medium can also contribute to foaming, particularly if the medium is rich in proteinaceous components or other high-foaming materials.

Antifoam O-60 is a general-use antifoam and should be considered a non-toxic additive to culture medium. However, any antifoam being used for the first time should be tested to ensure it will neither inhibit the growth of the microorganism nor act as a growth substrate (if this is a concern). Antifoams should be tested for adequate defoaming under representative culture conditions. These conditions should include medium composition, temperature, pH, mixing, and aeration among others. If the antifoam is not effective under these conditions either a higher amount or a different antifoam should be selected and tested. If the antifoam inhibits growth or acts as a substrate, a different antifoam should be selected and tested.

Preparation Instructions

Sterilize by autoclaving. Multiple autoclaving will not significantly affect performance. The flow properties of Antifoam 204 allow pumping to a fermenter on an as-needed basis.

Procedure

A starting concentration between 0.01% and 0.02% (v/v) is recommended. The optimal amount of antifoam required for various applications must be determined empirically. Antifoam O-60 can be added to media prior to sterilization or sterilized individually by autoclaving and added to sterile fermenter media on an as-needed basis using an antifoam probe connected to a suitable pump.

Product Profile

Antifoam O-60 is a liquid non-silicone defoamer having a specific gravity of 0.99. It is a completely organic antifoam that is insoluble in water but soluble in mineral oil, vegetable oils, alcohol, or alcohol blends. Each lot is tested with *Escherichia coli* (ATCC #25922) grown in Terrific Broth (Product No. T0918). The optical density of a culture with 0.02% (v/v) antifoam O-60 was $\geq 80\%$ of the control culture after 8 hours of growth at 37°C. Antifoam O-60 has been shown to have no significant inhibitory effect on the growth of *Bacillus subtilis* (ATCC #6051) in Terrific Broth.

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