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Product Information

Antifoam B Emulsion

Catalog Number **A6707**
Store at Room Temperature

Product Description
The effectiveness of an antifoam is culture and medium dependent. An antifoam allowing good growth of one microorganism may inhibit growth of another species. Some microorganisms produce significant quantities of extracellular proteins or biosurfactants, which contribute to foaming of the medium. These by-products are often produced during the latter stages of the fermentation. The composition of the growth medium can contribute to foaming, particularly if the medium is rich in proteinaceous components.

Antifoam B Emulsion is a 10% emulsion of Antifoam A, a 100% active silicone defoamer, and non-ionic emulsifiers, useful for the control of foaming in microbial culture flasks or fermentations. Antifoam B Emulsion 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.

Each lot is tested with *Escherichia coli* (ATCC #25922) grown in Terrific Broth (Catalog Number T0918). The optical density of a culture with 0.01% (v/v) Antifoam B Emulsion was ≥80% of the control culture after 8 hours of growth at 37 °C.

Antifoam B Emulsion has been shown to have no significant inhibitory effect on the growth of *Bacillus subtilis* (ATCC #6051) in Terrific Broth.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
Sterilize the product by autoclaving. Multiple autoclaving will not significantly affect performance.

Antifoam B Emulsion can be prediluted with 3–10 parts of cool water to aid in dispersion. Prediluted suspensions should be used immediately.

The flow properties of Antifoam B Emulsion allow pumping to a fermenter on an as-needed basis.

Storage/Stability
Store the product at room temperature.

Procedure
A starting concentration between 0.005–0.01% (v/v) is recommended. The optimal amount of antifoam required for various applications must be determined empirically. Antifoam B Emulsion can be added to the medium prior to sterilization, or sterilized individually by autoclaving and added to sterile fermenter medium on an as-needed basis using an antifoam probe connected to a suitable pump.

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