

Microbial Freeze Drying Buffer

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Sample Preparation Products

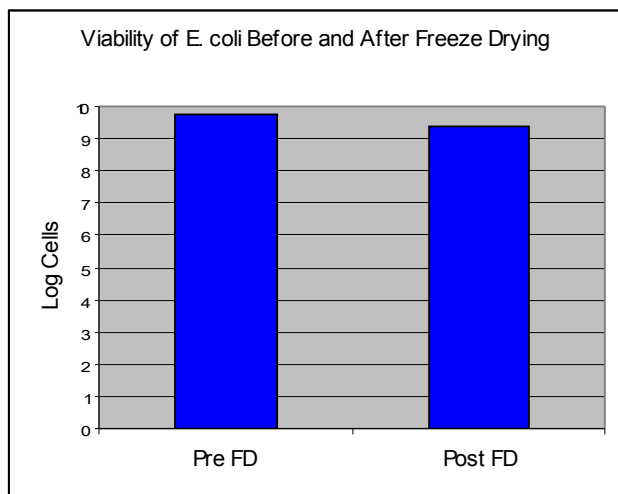
Microbial Freeze Drying Buffer

The Microbial Freeze Drying Buffer has evolved from a standard solution described in the ATCC lyophilization manual. It has been improved to be free of all animal products/proteins while maintaining its effectiveness.

To use, cultured microorganisms are pelleted and resuspended in an equal volume of Microbial Freeze Drying Buffer. Lyophilization can be performed with both shelf and manifold type systems using common methods.

As compared to sucrose, Microbial Freeze Drying Buffer is less likely to collapse and resuspension of dried cells is rapid. In comparison, sucrose often collapses and dissolution can be slow.

Viability of bacteria in Microbial Freeze Drying Buffer is typically over 90%, far exceeding methods relying on skim milk. A comparison of cell viability before and after freeze drying typically shows a drop of less than 10%.



Benefits

- ❖ No animal products or proteins.
- ❖ Higher viability of bacteria than buffers using sucrose or skim milk.
- ❖ Stable for at least 24 months under sterile conditions.
- ❖ More cost effective BSA containing formulations.
- ❖ Ready to use.



Characteristics

Formulation: A proprietary solution of hydrolyzed plant protein and carbohydrate lyoprotectant. Filter sterilized and packaged in either 100 or 500 ml PET bottles.

Shelf Life: Studies of Microbial Freeze Drying Buffer indicate it is stable for at least 24 months at room temperature with no loss of functionality. It is important to note that these solutions are sterile and that shelf life stability is dependent upon sterility.

Viability: When compared against fresh cells, freeze drying with Microbial Freeze Drying Buffer typically yields between 90-100% viability. This assessment is made by dilution to extinction of both lyophilized and fresh cells. It is important to note that each microbial strain may present individual challenges for freeze drying. Before committing to large scale preservation projects, evaluate all buffers for their long term effect on the microorganism.

Product Number	Description	Cost
OP-MFDB 100-05	100 mL Microbial Freeze Drying Buffer	\$50
OP-MFDB 500-06	500 mL Microbial Freeze Drying Buffer	\$103