

Freeze Drying Indicator Sterile Filtered

Product Number: LRFI 500-04
500 ml

Related Products:

Lyophilization Reagent, 2X Concentrate
Product No. LR2X 500-02

Microbial Freeze Drying Buffer
Product No. MFDB 500-06

For laboratory use only. Not for drug, household or other uses.

**Warning! Harmful by inhalation, in contact
with skin and if swallowed.**

Freeze Drying Indicator solution is a mannitol/ lyoprotectant/ indicator solution that allows for the monitoring of the freeze drying process. The solution can be used full strength or diluted 1:1 with samples prior to freeze drying. Mixing sample with this solution should be considered a destructive assay, thus DO NOT use with irreplaceable samples as the indicator may damage the sample. This product is filter sterilized and was packaged aseptically. Use aseptic technique when removing reagent. Store solution at room temperature.

This product is the same formulation as the Lyophilization Reagent 2X Concentrate and is useful as a parallel sample indicator during freeze drying with that reagent system. It can also be used to map freeze dryers for validation purposes. Freeze dried control solutions that are pink contain >2% moisture while solution that are blue with residual pink color are <2% moisture. Samples that are only blue are completely dry.

The freeze drying parameters must be determined for each freeze dryer. However the reagents are optimized to freeze drying on the following cycle.

Freezing:	30 minutes from ambient to -40°C, hold for 1 hr.
Primary Drying:	Increase temperature to -10°C, hold for 16 hours (larger volumes may require longer drying times).
Secondary Drying:	Increase temperature to 20°C and hold for 2 hr.

The Freeze Drying Indicator can be used to optimize freeze drying runs by using it as an indicator of sample dryness during both the primary and secondary drying steps. Time may be reduced based on the colorimetric change in the solution. This solution may not completely represent the status of other samples and does not correlate to lyophilization buffers other than the OPS Diagnostics, LLC formulations.