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LyoLearn Tech Brief

Effect of Concentration, Vial Size and Fill Depth on Product Resistance of Sucrose Solutions During Freeze Drying

ABSTRACT:

In a freeze drying process, mass transfer and product temperature are dependent upon the resistance of the product matrix to water vapor flow (R_p). R_p is influenced by numerous factors such as nature of the product, solute concentration and freezing properties, and was found to differ between formulations and process conditions used. The objective of this study was to characterize product resistance as a function of dry layer thickness for various sucrose solutions using the SMART Freeze Dryer™ Technology.