

The large-scale commercial application of a freeze-dried vaccine formulation is credited to this date in eradicating small pox and better utilization of a BCG and rabies vaccine especially in the developing world.

Summary

Lyophilization is now a standard platform with multiple utilities extending from pharmaceuticals to food industry. Its evolution and understanding over the years has increased significantly. In this chapter, we covered the origin, definition, and key historical events that led to the development of modern day freeze-drying, and its widespread applications expanding from basic food needs to biotechnology products. Special consideration was given to the history of lyophilization process, vaccines, and biopharmaceuticals. A detailed account of recent developments in lyophilization of biologics and vaccines, with a focus on different modalities, is discussed in the subsequent chapters of the book.

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