

Liquid Formulation of Lactoferrin as a Model Glycoprotein

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The aim of this study is to develop a liquid formulation of Interferon-beta using Lactoferrin as a model protein. Interferon-beta (IFN- β) is used to treat multiple sclerosis (MS). The lyophilized formulation of IFN- β commonly contains complex organic excipients and stabilizers such as nonionic surface active agents, various sugars, organic polysols and human serum albumin (HSA). However, the use of HSA has drawbacks. HSA from human blood has a potential to introduce virus contamination such as HIV, HBV, HCV. Therefore, we selected amino acids as a stabilizing agent instead of HSA. Amino acids are the most preferred stabilizing agent for the present research. In this study, we used Lactoferrin as a model glycoprotein instead of IFN- β since Lactoferrin has a pI (8.0-8.2) similar to that of IFN- β . In addition, it has the possible immunomodulatory activity. Analyses were performed using reverse-phased high-performance liquid chromatography and UV spectrometry.

References

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