

Inkjet Printing of Proteins: an Experimental Approach

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© 2016, American Association of Pharmaceutical Scientists. Peptides and proteins represent a promissory group of molecules used by the pharmaceutical industry for drug therapy with great potential for development. However, the administration of these molecules presents a series of difficulties, making necessary the exploration of new alternatives like the buccal route of administration to improve drug therapy compliance. Although drop-on demand printers have been explored for small molecule drugs with promising results, the development of delivery systems for peptides and proteins through inkjet printing has seen little development. Therefore, the aim of this study was to assess the feasibility of using a thermal inkjet printing system for dispensing lysozyme and ribonuclease-A as model proteins. To address the absorption limitations of a potential buccal use, a permeation enhancer (sodium deoxycholate) was also studied in formulations. We found that a conventional printer successfully