

The Effect of Inkjet Printing over Polymeric Films as Potential Buccal Biologics Delivery Systems

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© 2018 American Association of Pharmaceutical Scientists The buccal mucosa appears as a promissory route for biologic drug administration, and pharmaceutical films are flexible dosage forms that can be used in the buccal mucosa as drug delivery systems for either a local or systemic effect. Recently, thin films have been used as printing substrates to manufacture these dosage forms by inkjet printing. As such, it is necessary to investigate the effects of printing biologics on films as substrates in terms of their physical and mucoadhesive properties. Here, we explored solvent casting as a conventional method with two biocompatible polymers, hydroxypropyl methylcellulose, and chitosan, and we used electrospinning process as an electrospun film fabrication of polycaprolactone fibers due to its potential to elicit mucoadhesion. Lysozyme was used as biologic drug model and was formulated as a solution for printing by thermal inkjet printing. Films were characterized before and after print