High Throughput Microfluidic Electrophoresis Assays for Rapid Characterization of Low Molecular Weight Protein Biotherapeutic

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Abstract

With the exponential growth of biotherapeutics and the advent of follow-on-biologics there is a need for expanded biochemical methods to characterize such complex molecules, as their pharmacological activity, antigenicity, circulation and clearance are profoundly impacted by subtle changes in impurities and/or breakdown products. Of the expiring patented recombinant drugs, low molecular weight biotherapeutics include human growth hormones, interferons and insulins. Microfluidic electrophoretic assays provide a high throughput platform that enable design of experiments and their impact on yield and purity of biotherapeutic proteins to be addressed. A high throughput microchip-CE method on the LabChip GXII for analysis of low molecular weight proteins when integrated with the ready to use reagents not only simplifies the sample to answer paradigm but addresses. A high throughput microchip-CE method on the LabChip GXII for analysis of low molecular weight proteins when integrated with the ready to use reagents not only simplifies the sample to answer paradigm but...