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HYBRID

Selective Capture and Separation of Blood Plasma Derived Therapeutic Proteins on a New Monolithic Media CIMmultus PrimaT

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Human plasma contains thousands of various proteins in a concentration ranging from a trace to a relatively high amount (picogram to gram quantities). Each protein has a specific function in the homeostasis of the human body and a lack or a deficiency of a plasma protein might be life-threatening. During a disease process, several plasma proteins are observed to severely decrease due to consumption. A replacement therapy with purified proteins extracted from pooled human plasma is beneficial in normalizing the level and improving the disorders. Due to the limited availability and supply of human plasma, an efficient industrial extraction and purification process of human plasma derived proteins is highly desirable. Chromatographic methods have been proven to be useful in industrial-scale manufacturing of plasma derived protein products. Implementation and combination of ion-exchange, affinity and size-exclusion chromatography have allowed the development of therapeutic products with improved purity and safety for treating congenital or acquired plasma protein deficiencies in patients. In this presentation, the excellent binding selectivity of a new mixed mode monolithic media CIMmultus PrimaT in the isolation and separation of a group of plasma proteins will be highlighted. Not only monolithic media offers advantage over particle based supports on processing time, but the relatively high selectivity will allow to further improve purity and safety of plasma derived products.

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