BSA removal using solid phase extraction with in-situ polymerization

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Serum albumin is one of the abundant serum proteins which block the expression other important biomarkers. The objective of this study is to remove serum albumin effectively by using solid phase extraction system in microfluidic devices. Solid phase extraction (SPE) is widely used for the separation and purification of biomolecules. In-situ polymerized monolithic bed is used as a stationary phase. The attractive features of in-situ polymerization is frit-free construction, easy preparation with good control of porosity and diverse surface chemistry. In this study, SPE is carried out with the effect of pH and protein concentration using functionalized monolith for better extraction efficiency in microfluidic device. The BSA concentration is analyzed with Lowry method.