

Isoelectric focusing in PDMS microchannels

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Currently, the trend in microfluidic is integration of proteins exploration techniques on lab-on-chip for micro total analysis systems. In this study, we are targeting proteins separation by isoelectric focusing. We have developed an easy-to-fabricate polydimethylsiloxane (PDMS) microchip on a microscope slide where a mixture of polystyrene beads in Sodium Dodecyl Sulfate solution undergoes separation in a pH gradient in a channel formed by nickel foil electrodes. Optimal conditions for good detection and to prevent bubbles formation are still to be discussed.