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Arginine homopeptides for plasmid DNA purification using monolithic supports

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Abstract

Purification of plasmid DNA targeting therapeutic applications still presents many challenges, namely on supports and specific ligand development. Monolithic supports have emerged as interesting approaches for purifying pDNA due to its excellent mass transfer properties and higher binding capacity values. Moreover, arginine ligands were already described to establish specific and preferential interactions with pDNA. Additionally, some studies revealed the ability of arginine based cationic peptides to condense plasmid DNA, which increased lengthening can result in strongest interactions with higher binding capacities for chromatographic purposes of large molecules such as pDNA. In this work, arginine homopeptides were immobilized in monolithic supports and their performance was evaluated

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