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Short Communication

Preparative concentration of nucleic acids fragments by capillary isotachophoretic analyzer

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Highlights

- Preparative concentration of DNA fragments
- Capillary isotachophoretic analyzer with preparative valve
- Optimization of DNA focusing and fraction collection
- Experimental factors were investigated experimentally as well as by simulation
- DNA content in the collected sample was verified by fluorimeter and chip CE

Abstract

Sample preparation plays an important role in the DNA analysis workflow. Real samples often include a complex matrix, such as blood and other bodily fluids, or exogenous impurities, e.g., from the scene of crime. Most of the common nucleic acids isolation techniques are based on extractions; however, isotachophoretic focusing has recently attracted some interest for its simplicity and potential for very high enrichment factors and ease of automation. Here, we report on the use of a commercial isotachophoretic instrument for optimization of DNA focusing and

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