EXTRACTION OF PEPTIDES FROM BODY FLUIDS USING SUPPORTED LIQUID MEMBRANES

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Abstract

Sample pre-treatment is a very important step in many analytical procedures, especially when the analyte is presented in low concentration in complex sample matrices. In this paper, potential using of the supported liquid membrane (SLM) technique as a sample preparation step in order to isolate, pre-concentrate and separate small peptides and phosphono dipeptides from aqueous solutions and body fluids is discussed. An influence of various parameters including carrier type, donor and acceptor phase compositions, presence of salts and proteins in analysed samples on extraction efficiency and selectivity is presented. Additionally, comparison of SLM extraction efficiency from aqueous samples and body fluids is presented.

Finally, a fully automated system consisted of SLM extraction coupled on-line with HPLC-UV for the analysis of selected peptides from blood plasma is shown.

K e y w o r d s: peptides, phosphono dipeptides, supported liquid membranes, extraction