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论文

PDMS微流控电泳芯片的快速制备

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摘要 采用Protel软件绘制微流控沟道的形状，利用电路板制作技术加工出模具。该芯片由PDMS基片和PDMS盖片组成，微流控沟道位于基片上，深度和宽度分别为75μm和100μm，由盖片对其进行密封。考察了有绝缘漆模具和无绝缘漆模具制作的芯片的电泳分离情况。在所制作的PDMS微流控电泳芯片上对用异硫氰酸酯荧光素标记的氨基酸进行了电泳分离，当信噪比S/N=3时，最小检测浓度达到0.8×10-11mol/L。

关键词 电路板 制备 微流控电泳芯片 分离

分类号 TN364

Fast fabrication of PDMS microfluidic electrophoresis chip

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Abstract The figure of the microchannel was drawn with the Protel software.The mould was fabricated by the circuit board fabrication technique. The chip is composed of PDMS base slab and PDMS cover slab，and the microchannel whih 75μm in depth and 100μm in width is laid on the base slab sealed with the cover slab. The electrophoresis separations of the chips were investigated and the chips were fabricated by using the moulds coated with and without insulation lacquer. The performance of the chip is valuated by the determination of FITC fluorescein-labeled amino acids to a minimum detectable concentration of 0.8×10-11mol/L,when the signal-to-noise- ratio (SNR) S/N is 3.

Key words circuit board fabrication microfluidic electrophoresis chip separation

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