

Scope [3]

Microfluidic cytometer using polymer salt bridge

Honggu Chun¹, Jongho Joo¹, Hee Chan Kim¹ and Taek Dong Chung²

1. Department of Biomedical Engineering, College of Medicine and Institute of Medical and Biological Engineering, Medical Research Center, Seoul National University, 28 Yongon-dong, Chongno-gu, Seoul 110-744, Korea
2. Department of Chemistry, Sungshin Women's University, 249-1 Dongsun-dong, Seongbuk-gu, Seoul 136-742, Korea

E-mail : bluehayato@melab.snu.ac.kr

In this paper we have developed a technique on cytometry using polyelectrolytic salt bridge-based electrode (PSBE). It was implemented onto a micro-fabricated glass chip. The PSBE was formed using UV ray as the polymerization energy source. The electrodes were fabricated onto the side walls of the glass microchannel, enabling high sensitivity and vast robustness of detection. Since the electrodes were composed of salt bridge, low frequency impedance analysis was possible and the entire circuitry was simple. Furthermore, polymerization was done by UV excitation, so the formation of the electrodes was done with simple procedures.

We were able to detect the size of microbeads flowing through the channel by the size of signals the electrodes produced. Also, fast cytometry with speeds up to 3000 counts/sec was possible.

References

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