

عنوان مقاله:

Design and Numerical Study of a Microchip for Separation of Biological Microparticles

محل انتشار:

بیست و هفتمین کنفرانس سالانه بین المللی انجمن مهندسان مکانیک ایران (سال: 1398)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Seyed Ali Tabatabaei - MSc student, Tarbiat Modares University

Mohammad Zabetian Targhi - Assistant Professor of Mechanical Engineering, Tarbiat Modares University

خلاصه مقاله:

Today, with the progress of science and technology, in order to comprehensively examine the common diseases in the world, in the fields of medicine and engineering, we are witnessing an increase in studies on the separation of biological elements on microfluidic chips. Isolation of biological elements is important in order to identify and study particles in order to diagnose, improve or treat diseases and improve health status. The separation of biological elements, such as cancer cells, can have a special impact on the process of sampling, medical diagnosis, and testing. The use of active and passive mechanical methods, including the use of external fields, like a magnetic field or governing flow parameters, can play a special role in this situation. In this article, we try to design and numerical study a microfluidic microchip for particle separation with a combined active and passive method. With using inertia and magnet technique together, we could improve efficiency and purify of separation

کلمات کلیدی:

Microfluidics, Passive separation, Active separation, Inertia, Circulate Tumor Cell

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/921331>

