

عنوان مقاله:

Redesign and Accuracy Improvement of Disposable Infusion Pumps

محل انتشار:

مجله بین المللی طراحی پیشرفته و تکنولوژی ساخت, دوره 15, شماره 2 (سال: 1401)

تعداد صفحات اصل مقاله: 7

نویسندگان:

sajjad pakzad - Faculty of Design, Tabriz Islamic Art University, Iran

ahad shah hoseini - Faculty of Design, Tabriz Islamic Art University, Iran

Hossein Rashid Myab - M.Sc. Student, Faculty of Design, Tabriz Islamic Art University, Iran

Amirhossein Vazirpanah - M.Sc. Student, Faculty of Design, Tabriz Islamic Art University, Iran

خلاصه مقاله:

Nowadays, disposable injection pumps are widely used in hospitals and home care settings to provide various therapies such as chemotherapy, antimicrobial, analgesic, and anesthetic treatments, as well as for postoperative pain control and chronic pain control. Since the accuracy of the injection is very important in infusion pumps based on the flow rate, it is therefore important to reduce the error in this device. In this study, the basic design principles of these pumps and the design problems of the sample appearance available in the market were investigated. Since one of the vital problems of this type of pump is their inaccuracy, because they are unable to inject a certain amount of drug for a certain period of time, so one of the main objectives of this study is to improve the accuracy of the injection. Also, as this device is available to the patient for a long time at the time of injection, ease of use is one of the design goals. Finally, this paper ends with a design and prototype which is better in the shape of the device and a big improvement in the accuracy.

کلمات کلیدی:

Accuracy Improvement, disposable Infusion Pump, Redesign

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1611402>

