

عنوان مقاله:

Increasing Bacterial Cellulose production by Optimization of Culture Conditions

محل انتشار:

یازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1393)

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خلاصه مقاله:

Bacterial cellulose (BC) is a biopolymer receiving great attention since bacterial cellulose is comparable to the synthetic cellulose. Bacterial cellulose has wide applications and it can be considered as a useful biopolymer. There are some causes that can effect on the result of production. The process, the microorganism, culture condition, physical condition, kind of bioreactor, can change the results and the amount of bacteria that can be made. So in this study the attempt is for increasing the production by optimization of the culture condition. It has some steps too, like the amount of the bacteria that should be added to the medium, or the age of cultivation media or the condition of production of culture that can be static and dynamic. In this study investigation of the perfect number that should be add to the medium and the suitable age of bacteria has been done. Using the optimum number of bacteria will help you to reach more production on the process. Afterward the dry weight of BC which is produced in this study is reported too. The weight of bacterial cellulose which is made by this optimization is increased from 3.2 to 9 gr per liter. The best day for incubation is the 4th day with the cell number of 36 million microbes as cultivation media in 1 ml medium.

کلمات کلیدی:

(Bacterial Cellulose, Growth Curve, A. xylinum, Colony Forming Unit (CFU

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