ABSTRAK

Sintesis membran selulosa asetat dari ampas tebu dibuat menggunakan metode inversi fasa dengan penambahan PS-MSG. Membran selulosa asetat diterapkan untuk filtrasi limbah cair tapioka.Tujuan dari penelitian ini yaitu untuk mengetahui karakteristik dari membran selulosa asetat dengan penambahan PS-MSG, dan untuk mengetahui persentase total penurunan nilai BOD dan COD limbah cair tapioka. Karakterisasi membran selulosa asetat meliputi uji fluks dan SEM. Nilai fluks air dan limbah setelah difiltrasi menggunakan membran selulosa asetat dengan penambahan PS-MSG sebesar 67,53 L/m^2.jam dan 56,48 L/m^2.jam. Hasil SEM penambahan aditif MSG 6% dapat mempengaruhi mofologi dari membran, yaitu dapat meningkatkan jumlah pori-pori yang terbentuk pada membran SA-PS, dibandingkan dengan membran SA-PS tanpa penambahan MSG. Persentase penurunan total nilai BOD dan COD berturut-turut sebesar 82,55% dan 79,38%.

Kata kunci: ampas tebu, membran, MSG, PS, selulosa asetat.

ABSTRACT

Synthesis of cellulose acetate membranes from bagasse was made using the phase inversion method with the addition of PS-MSG. Cellulose acetate membrane was applied for filtration of tapioca liquid waste. The purpose of this study was to determine the characteristics of the cellulose acetate membrane with the addition of PS-MSG, and the percentage of total decrease in the BOD and COD of tapioca wastewater. Cellulose acetate membrane characterization included flux value and SEM tests. The flux values of water and waste after being filtered using a cellulose acetate membrane with the addition of PS-MSG were 67.53 L/m^2.hour and 56.48 L/m^2.hour. The results showed that the SEM of the addition MSG 6% additive can affectthe morphology of the membran, which can increase the number of pores formed in the SA-PS membrane, compared to the SA-PS membrane without the addition of MSG. The total reduction percentage of BOD and COD were 82.55% and 79.38%, respectively.

***Keywords**: bagasse, cellulose acetate, membrane, MSG, PS.*