

ABSTRAK Penelitian ini dilakukan untuk mengetahui pengaruh perbandingan isopropanol – isobutano sebagai media reaksi terhadap karakteristik CMC dan mendapatkan perbandingan terbaik isopropanol – isobutanol terhadap karakteristik CMC. Penelitian ini menggunakan metode Rancangan Acak Lengkap (RAL), dengan perlakuan perbandingan media reaksi isopropanol – isobutanol (20 : 80, 40 : 60, 50 : 50, 60 : 40, dan 80 : 20) dan empat ulangan sehingga didapatkan 20 satuan percobaan. Parameter yang diamati meliputi rendemen, kadar air, Derajat Substitusi (DS), pH, viskositas, dan kelarutan. Data yang diperoleh dianalisis menggunakan ANOVA taraf 1% dan 5%. Apabila data yang diperoleh berpengaruh nyata, maka dilanjutkan dengan uji Duncan's New Multiple Range Test (DNMRT) pada taraf 5%. Hasil penelitian menunjukkan bahwa perlakuan terbaik pada perbandingan media reaksi isopropanol – isobutanol 20 : 80 menghasilkan CMC dengan rendemen 83,57%, kadar air 3,40%, DS 0,72, pH 5,76, viskositas 31,37cP, dan kelarutan 30,38% berwarna putih kecoklatan berbentuk bubuk

Kata kunci – CMC, Isobutanol, Isopropanol, Serat Kelapa Sawit

ABSTRACT This research was conducted to determine the effect of the ratio of isopropanol - isobutanol as a reaction medium on the characteristics of CMC and to obtain the best ratio of isopropanol - isobutanol on the characteristics of CMC. This research used the Completely Randomized Design (CRD) method, with a comparison treatment of isopropanol – isobutanol reaction media (20 : 80, 40 : 60, 50 : 50, 60 : 40, and 80 : 20) and four replications to obtain 20 experimental units. The parameters observed include yield, water content, Degree of Substitution (DS), pH, viscosity and solubility. The data obtained were analyzed using ANOVA at 1% and 5% levels. If the data obtained has a real effect, then continue with Duncan's New Multiple Range Test (DNMRT) at the 5% level. The results of the research showed that the best treatment in the isopropanol - isobutanol reaction media ratio of 20: 80 produced CMC with a yield of 83.57%, water content of 3.40%, DS 0.72, pH 5.76, viscosity 31.37cP, and solubility 30 .38% brownish white in powder form.

Keywords – CMC, Isobutanol, Isopropanol, Oil Palm Fiber