

Dekomposisi selulosa asetat dan selulosa asetat-selulosa asetat butirat dengan penguat organoclay terinterkalasi surfaktan HDTMA-Br =
Decomposition of cellulose acetate and cellulose acetate cellulose acetate butyrate with organoclay intercalated surfactant HDTMA-Br as nanofiller / Ghuzan Al Abrar

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Abstrak

ABSTRAK

Sintesis nanokomposit selulosa asetat - selulosa asetat butirat/ organoclay-HDTMA-Br (OCT-C16). Sebagai perbandingan, dalam penelitian ini juga disintesis nanokomposit selulosa asetat. Sintesis organoclay meliputi tiga tahapan yaitu purifikasi karbonat, sintesis Na-Bentonit Purifikasi dan sintesis OCT-C16. Pada tiap tahapan dilakukan karakterisasi dengan XRD, hasil pada sampel organoclay menunjukkan interkalasi pada surfaktan HDTMABr dapat meningkatkan basal spacing organoclay menjadi 19,76 Å. Dilakukan penambahan variasi persen berat OCT-C16 sebagai nanofiller sebanyak 0 wt%, 1 wt%, 3 wt%, 5 wt%, dan 7 wt% pada nanokomposit selulosa asetat - selulosa asetat butirat. Hasil sintesis dalam bentuk membran di uji tarik, uji dekomposisi dan SEM. Nanokomposit yang dihasilkan mudah terdekomposisi di alam.

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ABSTRACT

The formation of nanocomposite cellulose acetate - cellulose acetate butyrate / organoclay ? HDTMA-Br (OCT-C16). As a comparison, in this study also synthesized cellulose acetate nanocomposite. Organoclay synthesis involves three stages , namely purification of carbonate , synthesis of Na - Bentonite Purification and synthesis of OCT-C16 . at each stage were characterized by XRD and the results on samples showed intercalation of organoclay on HDTMABr surfactant can increase the basal spacing of organoclay to 19.76 Å . In the synthesis of nanocomposite cellulose acetate - cellulose acetate butyrate done every additional variation of weight percent OCT-C16 as much as 0 wt% , 1 wt % , 3 wt% , 5 wt% , and wt7 % . Tensile test , decomposition test and SEM to the nanocomposite. The result is biodegradable nanocomposite.