Study on the Sugar Alcohol Esters Synthesis of Acyl Donor Catalyzed by Novozym 435

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Abstract

Recently, sugar polymers are newly many studied to high functional composite materials and optical materials as a field of biomedical engineering. Specific properties of sugar esters depend on the acyl donor, sugar moiety and its chemical sturcture. 1,4-sorbitan contain multiple hydroxyl functionalties, all of which are capable of acylation by acidic and ester groups. Sugar esters, which are produced by esterification of 1,4-sorbitan, are biocompatible and biodegradable. Immobilized lipase Novozym 435 from *Candida antartica* as a biocatalyst was used in the glycosylation process.

In this study, optimal reaction condition was studied about enzyme amount, reaction temperature, reaction time, initial reactant and molar ratio of 1,4-sorbitan to acryl donor for enzymatic esterification.

References

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