

## **Influence of co-solvents and molecular sieve on mannose enzymatic acylation.**

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Sugar esters are non-ionic surfactants with numerous applications in the food and pharmaceutical industries. Mannose is an interesting ligno-cellulosic sugar from the biological point of view as mannose receptors are present on the surface of antigen presenting cells. Immobilised lipase B from *Candida antarctica* (Novozym 435) was used to catalyse the synthesis of mannosyl myristate in *t*-butanol. This product was obtained from mannose by esterification with myristic acid and by transesterification with vinyl myristate. After optimisation of the reactant concentrations, the influence of different co-solvents (DMSO, DMF, pyridine, formamide) and their percentages on the initial rate and yield was studied. Reaction media with and without molecular sieve were used. The results clearly showed that the sieve improved the esterification yield but had no impact on the transesterification reaction (initial rate and yield).

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