

The biotransformation process of 10-hydroxystearic acid in pilot scale.

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Hydroxy fatty acid have been propose for use in the various industries such as flavours, fragrances, cosmetic and food. Hydroxy fatty acids consisting of one or more hydroxyl groups and unbranched long carbon chain with carboxyl group on end of carbon chain. Some microorganism can be transformation from unsaturated fatty acids to hydroxy fatty acids. 10-hydroxystearic acid transformed from oleic acid by transformed e.coli. Biotransformation process have a many advantages like specific reacton, low energy consumption and less pollution. In spite of advantages, adaptation of industrial production process of biotransformation is too difficult, because less productivity than chemical process. Previously reported studies of 10-hydroxystearic acid were transformed less 60 g/l 10-hydroxystearic acid production. Our purpose of this study was enhanced productivity and purification process for adapt industrial process. We achieved, over 150 g/l biotransformation production and recovered over 90% purity 10-hydroxystearic acid.