

# Esterification of Terpene Alcohols to Produce Perfumery Compounds †

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**Abstract:** Terpene alcohol and esters find wide application in the fragrance, flavor, pharmaceutical, dyestuff, and plastic industries. Most flavor compounds are produced by traditional methods like chemical synthesis or by extraction from natural sources. To obtain flavor compounds naturally, new methods like flavor compound synthesis using biocatalyst have been explored. Biocatalytic reactions use mild operating conditions, have high specificity, leading to reduced side reactions, and produce high purity compounds avoiding the expensive separation techniques. In the present study, *Candida antarctica lipase B* (CALB) was used to produce different aroma compounds such as geranyl acetate, linalyl acetate, and terpinyl acetate. Reaction parameters like time and enzyme concentration were optimized for the synthesis of geranyl acetate using acetic acid and acetic anhydride. The process can be suitably scaled up for commercial production of these aroma compounds.

**Keywords:** Terpene alcohol; flavor; aroma; biocatalyst.

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