

## Use of supercritical extraction with lipase treatment for the removal of stinky odor in marine product

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Since marine products, seaweeds, anchovy, and fish have their own stinky odor, people sometimes hesitate to eat them. Stinky odors are related marine product odor, microbial spoilage odor, and oxidized odor. The chemical compounds associated with stinky odor are mostly aldehydes, ketones and alcohols derived from the unsaturated fatty acids in marine product. During storage the marine product deteriorate through autolytic and microbial reactions. In this research, the supercritical extraction process with lipase treatment has been adopted to remove stinky odor of marine product. With the change of temperature and pressure, the changes of nutrient compositions and odorous compound were detected with GC/MS and amino acid analyzer. When the supercritical extraction process without lipase was applied to the odorous sample, aldehyde concentration was decreased with the increase of temperature and pressure. The optimal temperature and pressure was 80oC and 100 bar, respectively. With lipase treatment, the optimal temperature was decreased to 50oC and pressure was 100 bar.