Effects of High Hydrostatic Pressure (HHP) and Storage Temperature on Physical, Microbial, and Chemical Attributes of Oysters

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Outline

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    A. Effects of HHP on the physical, microbial, and chemical attributes of oysters (*Crassostrea virginica*)
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Abstract

Oyster is the most abundant shellfish in the world that are harvested, with annual global production of more than 5,000,000 tons. As a filter feeder, oysters contain many human pathogens, such as *Vibrio parahaemolyticus* and *V. vulnificus* which causes liver and stomach illness and other critical diseases. The studies were to investigate the effect of different HHP treatments and storage temperature on the quality and non-volatile taste active compounds of oysters. The color, texture, tissue yield, and lipid oxidation values were higher in the HHP oysters than control. In addition, the counts of microorganisms, unsaturated fatty acid percentage, equivalent umami concentration (EUC) values, and glycogen were decreased with the increase of pressure. Based on the results, HHP can improve the safety and quality of oysters. Besides, being treated with 400 or 600 MPa for 3 min and stored at −20℃ can improve the safety of oysters for 15 days.

References

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