探討白蝦養殖模式對其風味之影響

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摘要

白蝦具有高營養價值及誘人的風味，因而成為多數消費者喜愛的水產品之一，在強大的市場驅動力下，促使白蝦養殖產業的蓬勃發展，全世界的白蝦養殖產業以單養為主，在臺灣除了單養以外還有混養及生態養殖等多元的養殖方式，然而不同養殖法對於白蝦風味的影響目前鮮少針對此點研究，因此本研究將會探討養殖參數對白蝦風味的影響，期許能藉由儀器分析找出最佳養殖參數。食品風味一般由香氣、味覺、感官三個部分所組成，香氣分析透過氣相層析嗅聞技術 (gas chromatography-olfactometry, GC-O) 搭配香氣萃取物稀釋分析 (aroma extract dilution analysis, AEDA) 以找到白蝦中的關鍵氣味活性成分，結果顯示，白蝦中的關鍵氣味活性成分為帶有香米氣味的2-Acetyl-1-pyrroline及帶有烹煮馬鈴薯氣味的 Methional，影響白蝦整體味覺的游離胺基酸主要為帶有甜味及鮮味的Alanine、Glycine、Proline、Glutamic acid。將數據以主成分組成分析 (Principal component analysis, PCA) 分析後顯示，不同來源的樣品可以完全區分，且在高鹽度的飼養環境下會有較高的 Glycine、Taurine、Aspartic acid 用以調節白蝦的滲透壓；以單養模式下餵養白蝦會有較豐富的游離胺基酸組成，具有較多的甜味胺基酸如 Alanine、Proline、總鮮味胺基酸及總游離胺基酸，後續實驗將會納入更多不同養殖法的白蝦及蒐集養殖參數，藉統計法找出最佳參數，未來可提供養殖戶做為養殖白蝦之參考。

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