

Lipid profiles of wild caught and cultured shrimp, *Penaeus monodon*, in

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Abstract

Lipid levels and fatty acid profiles in the flesh of wild caught and cultured *Penaeus monodon* were analyzed using gas chromatography. The mean percentage lipid level of cultured *P. monodon* ($3.9\% \pm 0.2$ dry weight) was not significantly higher than that of the wild caught *P. monodon* ($3.7\% \pm 0.1$). The fatty acid profiles of wild caught and cultured shrimp were found to be significantly different from each other. The predominant fatty acids found in the flesh of both groups were Palmitic acid (16:0), Stearic acid (18:0), Oleic acid (18:1n-9), Vaccenic acid (18:1n-7), Linoleic acid (18:2n-6), Arachidonic acid-Omega-6 (20:4n-6), Eicosapentaenoic acid-Omega-3 (20:5n-3), and Docosahexaenoic acid-Omega-3 (22:6n-3). Total saturated fatty acids ($38.12\% \pm 1.59$) and polyunsaturated fatty acids ($18.31\% \pm 1.57$) contents were not significantly different in wild caught and reared *P. monodon* while monounsaturated fatty acid levels ($44.82\% \pm 1.41$) were significantly higher in wild caught *P. monodon*. Palmitoleic (C16:1), Heptadecenoic (C17:1), Myristoleic (C14:1), Vaccenic (C18:1n-7), Hexadecatetraenoic (C16:4n-3), Alpha linoleic Omega-3 (C18:23n-3), Stearidonic (C18:4n-3), Docosatetraenoic (C22:4n-6), Docosapentaenoic (C22:5n-6) and Arachidonic Omega-6 (20:4n-6) contents were significantly high in wild caught shrimp, while Linoleic Omega-6 (18:2n-6) and Docosahexaenoic Omega-3 (22:6n-3) were significantly high in cultured shrimp.