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Effects of vacuum packaging on nutrient contents of fillet fish Lethrinus Nebulosus

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A im of this was to study the effect of vacuum packaging on proximate composition and mineral content in fish fillet stored at -18 ° C for 0, 20 and 40 days. To determine the proximate composition and elements, standard and AOAC (2005), were used. Results showed the lowest zinc content in vacuum condition was found after 20 days (1.95 ppm+ 0.27), but the highest value was found after 40 days (2.69ppm+ 0.12) of frozen storage. The amount of sodium also increased during this period where the amount reached to (1318ppm+6.00) at end of the storage period. Potassium was found to be the most abundant mineral among the macro elements in fish tissue. Its amount in both packaging conditions did not show any significant difference, but after 20 days of experiment, amount

of potassium in vacuum stored sample was higher than control (3477ppm+49.50). Amount of calcium in fish tissue was also higher than other samples at the end of the frozen storage period (398ppm+1.52). The protein percentage of fish fillets increased during the experiment period, except for day 0 (%19.31+0.04), but frozen samples under vacuum at 20 day (%19.52+0.05) and 40 day (%19.73+0.08), found more than control sample, however, there was no significant difference between them (p> 0.05). It can be concluded that vacuum packaging can significantly influence mineral content of fish fillets, and their shelf life can be enhanced through frozen storage.

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