Preeyanuch Ongprasert 2006: Biochemical, Microbiological and Sensory Changes in Soft Shell Mud Crab (*Scylla serrata,*Forskal) Stored Different Packaging. Master of Science (Fishery Products), Major Field: Fishery Products, Department of Fishery Products. Thesis Advisor: Mr. Juta Mookdasanit, Ph.D. 114 pages.
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Biochemical and microbiological changes and shelf life of soft-shell mud crab prepared and stored under different conditions at 4°C; namely: untreated vacuum packed, treated with 1 ppm ozone and vacuum packed and untreated packed under modified atmosphere (MAP) of 80 % CO_2: 20% N_2, were studied. Shelf life was mainly judged by accepability scores of panelists. Biochemical indicators and microbiological quality were determined every day during storage. It was found that untreated vacuum packed, untreated MAP and 1 ppm ozone treated vacuum packed samples had shelf life of 4, 5 and 6 days, respectively. The Quantitative Descriptive Analysis (QDA) used for evaluation of sensory attributes revealed that the intensity of off-odour increased as storage time increased. The biochemical and microbiological changes indicated that TMA-N and TCA soluble protein contents increased with storage time but pH decreased when storage time increased. For nucleotide degradation, ATP, ADP and AMP contents were high at the early period but at the end of study Ino and Hyp contents markedly increased. At the end of shelf life storage, the untreated vacuum packed, untreated MAP and 1 ppm ozone treated vacuum packed soft-shell mud crab had K-value, G-value, H-value and P-value of 19.12-44.69 %, 59.21-74.69 %, 29.57-51.33 % and 52.09-61.88 %, respectively. The changes depended mainly on accumulation of Hyp and Ino contents. It was found that microbiological quality and Ki-value were not appropriate as freshness indicator.

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