Abstract.

In this study, the effect of Genistein as one of phenolic compounds found in soy to preventing or delaying the onset melanosis and of microbial spoilage and chemical *Litopenaeus vannamei* were kept in ice. In order do conducting the research cultured *Litopenaeus vannamei* immediately transported to the laboratory with ice were after catching. The shrimps produced in the treatments were immersed for 5 minutes. Microbial assessment(MBC, PBC), evaluation of chemical (pH), measuring factors of corruption (TVB-N, TBA), amine biogenic measure and also Melanosis assessed on days 0, 2, 4, 6, 8 and 10. Generally, Treated with serum containing Genistein 0.1 %and soluble Nacl, EDTA, lactic acid and ascorbic acid was more effective in inhibiting Melanosis in *Litopenaeus* vannamei rather than other treatments. Shrimps treated by treatments containing Genistein concentration of 0.1 % and a solution of Nacl, EDTA, lactic acid and ascorbic acid were treated and were kept on ice for 10 days, showed the amount of bacteria Mesophilic and psycrophilic and also the pH, TVB-N and TBA in a significantly lower amount, compared with other treatments.The presence of biogenic amine (histamine, tyramine and Putresin) in shrimp treated with genistein 0.1 % and soluble salt, lactic acid, ascorbic acid and EDTA was reduced compared with other treatments. According to these findings, can be said that Genistein as a natural inhibitor of polyphenol oxidase in *Litopenaeus vannamei* shrimp can be used and Melanosis forming in during storage ice, may delay. The study performed showed very well that instead of using Metabisulfite sodium that is harmful to human health it is possible to use Genistein with concentration 0.1 % or higher concentration.

Keywords: Genistein, Melanosis, Litopenaeus vannamei ,Quality

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Effect of genistein on melanosis and chemical and microbial quality of *Litopenaeus vannamei* during ice storage

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