

**EFFECT OF THYMOL, EUGENOL, ALPHA-TERPINEOL
AND CARVACROL ON SHELF LIFE OF
ANCHOVY FILLETS STORED AT 3±1 °C**

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The influences of thymol, eugenol, alpha-terpineol and carvacrol at dose of 1% on sensory, chemical and microbiological quality parameters of anchovy (*Engraulis encrasicolus*) fillets during refrigerated storage (3±1 °C) were investigated. The sensory results showed that the shelf-life of the fish was 8 day for control group, 15 day for group treated with alpha-terpineol and carvacrol, and 19 day for group treated with thymol and eugenol. At the limit of the acceptability, TVBN value was 34.90 mg/100g at 5 day for control group, 29.27 and 33.44 mg/100 g at 15 days for group treated with alpha-terpineol and carvacrol, and 43.09 mg/100 g for group treated with thymol at 19 days. Significant changes in TBA and peroxide value (PV) was observed during storage periods, whilst application of carvacrol, eugenol and alpha-terpineol in fish fillets resulted in lower TBA and PV concentrations. Initial free fatty acid (FFA) value was found as 2.18 (% oleic acid). The highest fatty value was found for group treated with alpha-terpineol, although group treated with thymol was generally had the lowest FFA values. Total viable count increased with storage time and the highest microbial growth was observed for control group. Groups treated with thymol and eugenol had the lowest microbial load. As a result, thymol followed by eugenol had strongest the antioxidant and antibacterial activity on anchovy fillets.

Keywords: Thymol, eugenol, alpha-terpineol, carvacrol, fish quality

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