

Title Quality assessment of *Scomber colias japonicus* under modified atmosphere and vacuum packaging
Author Nikolaos Stamatis and John Arkoudelos
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Abstract

The effect of initial head-spaces of atmospheric air, vacuum and modified atmospheres packaging (50% CO₂/50% N₂) on microbiological, physicochemical and sensory changes of chub mackerel (*Scomber colias japonicus*) was studied at 3 and 6 °C. The microbial flora of chub mackerel comprised mainly lactic acid bacteria, *Brochothrix thermosphacta* (Gram-positive flora) and secondly pseudomonads, *Shewanella putrefaciens*, *Enterobacteriaceae* (Gram-negative bacteria). The spoilage of chub mackerel stored under modified atmosphere was delayed compared with those samples stored under vacuum or air. The concentrations of moisture, ash, protein, fat and polyunsaturated fatty acids were not affected during the storage period compared to the pH values and the concentrations of lactate and ammonia that showed significant differences.