

Title Autolytic degradation and microbiological activity in farmed Coho salmon (*Oncorhynchus kisutch*) during chilled storage

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Abstract

Two deteriorative pathways (autolysis and microbiological activity) were studied in farmed Coho salmon (*Oncorhynchus kisutch*) for 24 days during chilled storage. These changes were assessed by nucleotide degradation (determination of adenosine 5'-triphosphate and its degradation compounds) and biochemical (pH; content of total volatile base-nitrogen; trimethylamine-nitrogen, TMA-N; histamine) and microbial (total aerobe mesophiles, TAM; coliforms) indices related to bacterial activity. An important nucleotide degradation could be assessed according to the fast inosine 5'-monophosphate formation, followed by degradation into inosine and hypoxanthine; the *K* value was found to be an accurate tool for the measurement of quality loss throughout the whole experiment. Regarding bacterial activity, contents of TMA-N and histamine and TAM counts assessment showed sharp increases after the end of the microbial lag phase (12–17 days); however, values obtained for histamine content and TAM growth remained below acceptable security limits throughout the whole experiment.