

Title Biochemical changes and quality loss during chilled storage of farmed turbot (*Psetta maxima*)
Author Santiago P. Aubourg, Carmen Piñeiro, José M. Gallardo and Jorge Barros-Velazquez
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Abstract

Changes in three of the major biochemical components – nucleotides, lipids and proteins – related to quality loss in farmed turbot, were determined during 29 days of iced storage; results were complemented with sensory analysis. Nucleotide degradation, as estimated by the K value, underwent a gradual increase until day 19, in agreement with the loss of freshness observed for the sensory scores (high quality: days 0–2; good quality: days 3–14; fair quality: days 15–19). After day 19, the fish was judged unacceptable and the K value did not show differences until the end of storage. Lipid hydrolysis and oxidation occurred at slow rates, free fatty acid contents and the peroxide value being below 20.0 g kg⁻¹ lipids and 4.00 meq active oxygen kg⁻¹ lipids, respectively, during the whole storage. The content of fluorescent compounds did not increase significantly until day 19, when a sharp increase was detected. The electrophoretic protein profiles of turbot muscle did not point to any major protein degradation event or any significant change in protein during storage. However, a new band, corresponding to 22 kDa, could be observed at day 2 in the low-ionic strength buffer extract, whose concentration seemed to increase at days 9 and 14 and was present until the end of the chilled storage. The results obtained in this work indicate slow and gradual biochemical changes and long shelf life and good quality times (19 and 14 days, respectively) for iced turbot; these long times would be very profitable when turbot commercialisation is carried out in places distant from production farms.