

Title Whey protein-based coatings on frozen Atlantic salmon (*Salmo salar*): Influence of the plasticiser and the moment of coating on quality preservation

Author Laura Rodriguez-Turienzo, Angel Cobos, Vanesa Moreno, Amado Caride, Juan M. Vieites and Olga Diaz

Citation Food Chemistry, Volume 128, Issue 1, 1 September 2011, Pages 187–194

Keywords Edible coatings; Glazed fish; Yields; Colour; Lipid oxidation

Abstract

The effects of different whey protein concentrate coating formulations (with or without glycerol or sorbitol in two proportions) on frozen Atlantic salmon quality parameters were evaluated. The influence of the moment of coating application (before or after freezing) was also studied. The coating application after freezing increased the thaw yield, decreased the drip loss, and modified colour parameters of frozen and thawed fillets, in comparison with application before freezing. The moment of coating also influenced the colour of cooked fish fillets. The type of plasticiser affects the colour of thawed and cooked samples, but not the colour of frozen samples. The protein coatings delayed lipid oxidation of salmon fillets, providing better protection against it than water glazing, and this effect was more pronounced when glycerol instead of sorbitol was used in the coating formulation.

WPC + glycerol (1:1) coating was the best for frozen Atlantic salmon protection. The sensory properties of salmon fillets were not modified by the use of this coating.