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The effect of WPC nanocomposites and Marjoram (*Origanum vulgare*) extract coating on microbial changes of Siberian sturgeon (*Acipenser baerii*) fillet during refrigerated storage

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The effect of whey protein concentrate (WPC), WPC nanocomposites and marjoram extract coatings and their ability to improve the antimicrobial activity of *Acipenser baerii* fillet was evaluated. The fresh fillets were coated with WPC 5%, marjoram 0.5%, WPC nanocomposites (WPC 5% + marjoram 0.5%) and the control left untreated. Subsequently, total viable count, psychotropic count, and lactic acid bacteria (LAB) count were examined during 16-days of refrigerated storage ($4\pm1^\circ$ C). WPC nanocomposites reduced increasing process of total viable, psychotropic and LAB counts of the fillets in comparison with the marjoram 0.5%, WPC 5%, and control at the end of storage period. By application of WPC nanocomposites as a coating, the shelf life of Siberian sturgeon increase during refrigerated storage.

Biography

Dr. Haghighat Khajavi's laboratory group focuses on research seeking to understand how to improve foods and their ability to deliver improved health. The model being used to pave the way toward improving the health benefits of foods is herbal plant polyphenolic compounds. Polyphenols are naturally occurring compounds and secondary metabolites of plants with health benefits as an antioxidant. Dietary polyphenols and their importance in human health and disease was the evolutionary logic is the basis of the research program. Other goal of the laboratory research is to understand the properties of different food base nano-composites in order to better protection of the extracted antioxidants.

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