



USE OF CHITOSAN AND XANTHAN GUMS TO EXTEND THE SHELF LIFE OF MINIMALLY PROCESSED BROCCOLI (*Brassica oleracea L. Italica*)

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<https://doi.org/10.34302/crpjfst/2020.12.1.15>

Article history:

Received:

12 July 2019

Accepted:

15 February 2020

Abstract

The objective of this work was to apply edible coatings based on xanthan and chitosan gums in minimally processed broccoli and evaluate their physical, chemical, microbiological and sensory characteristics, during 12 days of refrigerated storage. The coatings were applied to the florets of broccoli. After the application of coatings, the broccoli heads were stored under refrigeration. 3 treatments were generated, being T1 the control treatment, T2 treatment with xanthan (1.5%) and T3 treatment with chitosan (1.5%). Of the evaluated treatments, the one which contained chitosan was the best in relation to the attributes of color, texture, loss of vitamin C and weight and also in relation to the sensory attributes when compared with the other treatments. The treatment containing xanthan was also efficient when compared with the control sample for all the performed analyzes. The presence of total coliforms and thermotolerant coliforms and *Escherichia coli*, as well as *Salmonella* for all evaluated treatments was not detected. Of the researched coatings, the treatment with chitosan, was the one that presented the best results, showing that they were able to reduce the microbial growth and extend the life-span of minimally processed broccoli for up to 12 days in refrigerated storage.
