



## EXAMINATION OF THE SURFACE CHANGES OF UV-C TREATED CARROTS

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### ABSTRACT

After harvesting, the carrot surface is more exposed to microbial contamination, so the vegetable is subjected to a rough wash. Washing does not result in sterility, but it greatly reduces surface contamination. As a result of washing, the epidermal layer is damaged and the carotenoid compounds begin to oxidize, resulting in an aesthetic defect. UV-C irradiation provides an opportunity to delay surface browning, with which we can achieve further germ reduction as well. During our tests, we developed a treatment device that illuminates the carrot with UV-C light while it is being rotated. We assessed possible microbiological changes and the degree of surface browning without treatment and after treatment. Based on our experience, UV-C lighting effectively reduced the total number of surface microbeads and delayed the formation of brown spots.

*Keywords: UV-C, UV-C treatment, Carrot, Carrot preserving*