

Title Keeping quality of use of fresh 'Kurdistan' strawberry by UV-C radiation
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Abstract

Fresh strawberry is a highly perishable product. As many chemicals used as postharvest treatments cause ecological problems or are potentially harmful to humans. Short wavelength (254 nm) UVC light is considered to be germicidal. In fruits, it has been shown that low UV doses induce production of anti-fungal compounds, ripening delay and reduction of chilling injury. The equipment is relatively inexpensive, but the technique is subject to certain safety precautions easy to use, and the radiation is lethal to most type of microorganisms.

Fresh 'Kurdistan' strawberry (*Fragaria x ananassa*, Duch. cv *Kurdistan*) was exposed to different doses (0.25 and 0.5 kJ/m²) of ultraviolet-C (254 nm, UV-C) radiation, and stored up to 7 days at -1-5°C. All UV-C radiation doses decreased growth of yeast, but only significant differences were found when the highest level was applied. UV-C radiation at an appropriate dose could reduce microbial loads without adversely affecting sensorial quality of Kurdistan, strawberry.

Fruit treated with the highest doses (0.5 kJ/m²) is significantly firmer on day 7 ($p < 0.05$) and this dose improved the sensory quality of the product. This UV technology could be an alternative technology, instead of application of antimicrobial compounds.