

# Safety and quality assurance of tomato using *Aloe vera* edible coating

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## Abstract

This study assessed the application of *Aloe vera* as edible coating for tomato. The effectiveness of two coating solutions made from fresh *A. vera* gel and spray-dried *A. vera* powder was compared. Evaluations were performed for organoleptic quality, physicochemical characteristics and microbiological assays. Organoleptic test showed that the application of coating was acceptable. Noteworthy was the finding at day 15 which demonstrated higher freshness score for edible coated tomatoes compared to non-coated samples. The fresh gel coated tomatoes could maintain their texture firmness, as well as reduce their weight loss. The microbiological assays revealed that gel solution made of fresh *Aloe vera* was proven to inhibit the growth of microorganism. Nevertheless, this finding had negative correlation with pH and total soluble solids. In conclusion, edible coating solution prepared from fresh *Aloe vera* gel was confirmed to be more effective in assuring the safety and quality of fresh vegetables compared to the gel prepared from spray-dried powder. This opens the possibility of application of *Aloe vera* as natural and safe edible coating for tomatoes by major industries, and more important by the small and middle scale industry.