

STUDY ON EFFICIENCY OF GEL NANOSILVER IN PRESERVATION FRESH LONGAN FRUIT

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Summary

Longan fruit is one kind of speciality fruit to be favourite by consumers. But, its season character together with short harvesting period reduces commercial efficiency. Finding the safe preservation method for longan fruit has increasingly attracted more attention. The objective of this study is to evaluate longan preservation effectiveness of gel nanosilver, a novel product of 2015 Viet creation programme. Testing on inhibitory ability of gel nanosilver against some isolated pathogens on longan fruit *in vitro* and *in vivo* was carried out. The effects of gel nanosilver at different concentrations on the physiochemical and sensory quality of longan fruit was also investigated. The inhibitory results indicated that the gel nanosilver of over 12% showed the highest inhibitory ability against pathogens of longan fruit. Fresh longan fruits treated by gel nanosilver of 12% had the best physiochemical quality (lowest weight loss ratio, change in color and TSS at least) and kept safety after 15-18 days of storage, that were 9-12 days longer than control. These results open new perspectives in using gel nanosilver for preservation fresh longan fruit meet the demand of domestic and export trade.

Keywords: *Preservation, gel nanosilver, longan fruit, Viet creation.*