

EFFECTS OF EDIBLE COATING BY USING CHITOSAN, PAPAIN  
AND BORAGE ON CHEMICAL AND PHYSICAL QUALITY  
OF MANGO FRUITS (*Mangifera indica* L.)

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Effect of edible coating by using chitosan, papain and their combination on post harvest quality of mango fruits (*Mangifera indica* L.) / Nurul Izzah Mustafa.

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**EFFECTS OF EDIBLE COATING BY USING CHITOSAN, PAPAIN AND  
THEIR COMBINATION ON POSTHARVEST QUALITY OF MANGO  
FRUITS**  
*(Mangifera indica L.)*

By  
**Nurul Izzah Binti Mustafa**

**Research Report submitted in partial fulfillment of  
the requirement of the degree of  
Bachelor of Science in Agrotechnology (Post Harvest Technology)**

**Department of Agrotechnology  
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## DECLARATION

I hereby declare that the work in this thesis is my own except for quotation and summaries which have been fully acknowledged.

Signature : 

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## ABSTRACT

This study was conducted to observe and determine the best post harvest treatment on mango fruits after treated with chitosan, papain and chitosan-papain combinations on post harvest quality of mango fruits in the ambient storage by analyzing the changes in weight loss (%), firmness (g), TSS, peel colour and visual appearance (defects) on mango fruits. Three different coating formulations were used which were chitosan (1%), papain (0.1g/L) and chitosan-papain combinations (chitosan 0.5% + 0.05g papain/L). However, all of these 3 treatments were not effective in maintaining the changes in total soluble solid (TSS) content of mango fruits during the storage time. Mango fruits treated with papain (0.1g/L) showed the best result in maintaining the visual appearance (defects) compatible with benomyl (10g/L) treatment. It is suggested that, chitosan (1%) is the best treatment in delaying ripening and maintaining firmness of mango fruits, while papain (0.1g/L) are potentially reducing the defects for mango fruits.