

**Title** Relationship between Flesh Firmness and Pectic Polysaccharide Content in “Red Maradol” and “Kaek-dum” Papaya Fruit during Ripening

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#### **Abstract**

Relationship between flesh firmness and pectic polysaccharide content in “Red Maradol” and “Kaek-dum” papaya fruit during ripening was investigated. Papaya fruit were harvested at the stage of one-fourth of peel yellowing and were stored at room temperature ( $25\pm 2$  °C, 83-86% RH). The flesh firmness of “Red Maradol” was declined rapidly after storage and then it was slightly changed through the end of storage period. The flesh firmness of “Kaek-dum” was lower than that of “Red Maradol” from the beginning of storage and it did not change throughout storage. The Water-soluble pectin (WSP) content in “Red Maradol” and “Kaek-dum” was significantly difference. The WSP content was higher in “Kaek-dum” than in “Red Maradol”. The WSP content in “Red maradol” was markedly increased after day 0 and then it was slightly increased to the end of the storage, while the WSP content in “Kaek-dum” was stable from day 0 to day 5. The relationship between the flesh firmness and the amount of WSP in both cultivars was also monitored. There was higher relationship between the flesh firmness and the WSP content in “Red Maradol” than in “Kaek-dum” ( $r^2 = 0.53$  and  $0.12$ , respectively). The results indicated that the WSP content can not be use as an indicator of softening level in “Kaek-dum” papaya.