

*Analisis Perilaku Mekanis Buah Salak Pondoh Selama Pemasakan dengan
Metoda Tumbukan Model Lichtensteiger (Putu Sudira)*

ANALISIS PERILAKU MEKANIS BUAH SALAK PONDOKH SELAMA PEMASAKAN DENGAN METODA TUMBUKAN MODEL LICHTENSTEIGER

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Abstract

This study was aimed to analyze mechanical properties of Salak Pondoh fruit on maturity periods through non-linear viscoelastic model from Lichtensteiger. Using a pneumatics impactor provided by piezoelectric force sensor BK 8200 and acceleration sensor BK 4374, the histories of the impact forces and impact acceleration were recorded on microcomputer system. Thirty-three Salak Pondoh fruit with seven maturity levels were evaluated through impact impulse on one side. The deformation velocity and deformation level of Salak Pondoh fruit, due to impact were analyzed and differentiated from impact acceleration data. Using non-linear visco-elastic Lichtensteiger model the mechanical properties of Salak Pondoh fruit were analyzed quantitatively. The result of this study shows impact force, deformation, and deformation velocity histories were able to describe firmness and softness mechanical properties of Salak Pondoh quantitatively.

Keywords: Mechanical properties, impact force, deformation, salak pondoh

PENDAHULUAN

Produk hortikultura salak pondoh merupakan salah satu komoditi unggulan Kabupaten Daerah Tingkat II Sleman Daerah Istimewa Yogyakarta. Secara fisik buah salak pondoh tersusun dari padatan dan cairan. Hasil penelitian Tranggono (1998) menyatakan

