

Forum Pascasarjana

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Abstrak

This study was aimed to determine maturity and ripeness of sawo (*Achras sapota* L.) based on near infrared (NIR) spectroscopy using artificial neural network. The NIR system was developed and applied to 120 sawo samples at the wavelength range from 1400 - 1995 nm, the data was recorded in 5 nm interval. The samples were separated into three group, i.e. mature, ripe, and over ripe based on their harvest time. The principal component analysis (PCA) was used to reduce dimension of NIR reflectance data that has been smoothed with moving average method. The 5, 10, 15 principal component was fed into the neural network model as input and the level of maturity and ripeness as output. The result recommended the use of 10 and 15 principal component as input on various nodes in hidden layer that would provided the highest accurateness of 100% in classifying the sawo based on its maturity and ripeness