

**Title** Cell wall degrading enzyme activities during ripening in Nangka (AAB) bananas  
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#### **Abstract**

Pulp softening during ripening in *Musa cv. Nangka (AAB)* banana was investigated. Pulp softening in bananas is mainly caused by a series of enzymes known as cell wall degrading enzymes which are initiated during ripening. Fruits used in this study were allowed to ripen at  $25\pm 2$  °C and 95% RH for 9 days. Ripening stage determination was done according to the peel colour changes of Nangka (AAB) bananas which were monitored chromatically and visually and subsequently correlated with the respiration pattern measured during ripening. The activity of four cell wall degrading enzymes (PME, PG, PL and cellulase) were studied. Results obtained showed a pattern of increasing activity throughout the ripening process where the lowest activity for all four enzymes was observed at the initial stage of ripening. PME and PG however, showed relatively higher activities compared to PL and cellulase in all ripening stages. Significant increase in all cell wall enzyme activities were observed after colour break and coincided with the respiration peak. These findings suggest that cell wall degrading enzymes are activated upon respiration burst and peel colour break during ripening in Nangka (AAB) bananas.