

#### Abstract:

Fruit flesh (aril) of freshly harvested durian softened rapidly, concomitant with a marked decrease in the number of ester bonds in water-soluble pectin fraction. Polygalacturonase activity markedly increased, whereas pectinesterase activity only slightly hastened. Heating (42°C) for 24 h did not reduce the rate of aril softening, but drastically reduced polygalacturonase activity and resulted in an increase in pectinesterase activity. The heat treatment reduced the degree of esterification of the water-soluble pectin fraction. It is concluded that the in vivo measurements on hydrolase activity, as expressed by the formation of water-soluble pectin do not correlate with the measured polygalacturonase and pectinesterase activities. The main decrease in firmness occurred between day 0 and 2, both in control and in heat-treated fruit. It is possible that the low polygalacturonase activity during this time, following heat treatment, was still adequate for softening to occur unhampered.