

Title Cell wall materials in the pulp of translucent and normal mangosteen
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Abstract

Translucent pulp disorder in mangosteen was thought to develop as a result of excess water, causing cells to burst. The cell sap leaked and replaced air in the intercellular space. The white pulp became translucent and hardened, probably due to changes in the cell wall. This work compared the changes in cell wall materials of the pulp between turning and black stages of normal and translucent mangosteen. The result showed that the translucent pulp was firmer, having lower dry matter content than the normal pulp. During ripening, the translucent pulp developed lower water soluble pectin with larger molecular size, higher CDTA soluble pectin with bigger molecular size and higher Na₂CO₃ soluble pectin content with smaller molecular size than in the normal pulp. Hemicellulose content in the translucent pulp was higher than those in the normal pulp at turning and red stages but became lower at purple and black stage. There was no clear change in molecular size in this cell wall fraction. It was suggested that during the development of translucent pulp, pectin degradation was restricted and polymerization of pectin took place.