

Title Pectin changes in specific gravity graded guava (*Psidium guajava* L.) fruit cv. Sardar during low temperature storage at 5°C

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Abstract

Sardar guava (*Psidium guajava* L.) fruits were harvested at colour break stage and divided into two specific gravity Groups I and II (<1.0 and >1.0). The fruits were stored at 5°C for 21 days. The fruits were analyzed at weekly intervals for weight loss, firmness, pectin composition and pectinolytic enzymes polygalacturonase (PG) and pectin methyl esterase (PME). The cold stored fruits exhibited continuous loss in weight and firmness, these losses were more in fruits of Group I. Water soluble pectin (WSP) levels increased during cold storage and was higher in Group I fruits. Generally, the alkali soluble pectin (ASP) levels decreased during storage. The levels of ammonium oxalate soluble pectin (OSP) were minimal in fruits of both the Groups. The activities of cell wall modifying enzymes PME and PG increased during storage in fruits of both the Groups. The activity of PG was higher in Group I fruits than in Group II fruits. The data suggest that WSP tends to increase, while ASP decreases in the fruits of both the Groups during cold storage at 5°C. The main enzyme is PG, which is higher in fruits of Group I, the more mature fruits.