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### Changes in Pectic Polysaccharides during the Ripening of Cherry Tomato Fruits

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Pectic polysaccharides in cherry tomato fruits (Pepe) have been studied at three stages of ripening (immature-green, mature-green, and mature-red). The alcohol-insoluble solids obtained from the fruits were fractionated into four groups of pectic polysaccharides: water-soluble pectin (WP), hexametaphosphate-soluble pectin (PP), HCl-soluble pectin (HP), and KOH-soluble pectin (KP). The content of total pectic polysaccharides decreased with ripening of the fruits; especially, the main fraction HP at immature-green stage hardly existed at the mature-red stage. Instead, the content of WP increased with maturation. The pectic polysaccharide fractions were analyzed by gel-filtration, and the molecular weight of each fraction decreased with ripening. This phenomenon was accompanied by an increase in the activities of the pectin-hydrolyzing enzymes, polygalacturonase and pectinesterase. These results indicate that the softening of cherry tomato fruits during the ripening may depend on degradation and depolymerization of pectic polysaccharides by the pectin-hydrolyzing enzymes.

**Keywords:** [pectin](#), [cherry tomato fruits](#), [ripening](#), [polygalacturonase](#), [pectinesterase](#)



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