

Title Effect of wounding on cell wall hydrolase activity in tomato fruit
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Abstract

Changes in the activity of the cell wall hydrolases – polygalacturonase (EC 3.2.1.15), pectinesterase (EC 3.2.1.11) and β -galactosidase (EC 3.2.1.23) – have been investigated following wounding of tomato fruit pericarp tissue (*Lycopersicon esculentum* cv. Ailsa Craig). In ripening fruit wounding appears to arrest the further synthesis of polygalacturonase. β -Galactosidase synthesis may also have been arrested in ripening fruit. The level of pectinesterase declined over the first 24 h following harvest, and since this was apparent in both wounded and unwounded tissue may be related to a harvest, rather than a wounding effect. There was a recovery of activity in intact fruit by 48 h after harvest but this seems to be impaired in wounded tissue. In the case of pectinesterase, this observation was extended to examine the changes in isoform profile and it appeared that the decline of this enzyme may be associated with the reduction of one specific isoform — PE2. In contrast to ripening fruit, wounding of fruit at the fully ripe stage appears to have no significant effects on the activities of any of these three enzymes.