

Changes in pectinolytic enzyme activities and intra-flesh texture heterogeneity during fruit ripening of ten new apricot clones

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Abstract:

The softening of apricot fruit results from significant changes in the cell wall which occurs during maturation. These modifications are essentially the result of enzyme activity modifying the cell walls composition and are involved in the detachment of the cell wall, which promotes tissue extension and growth. In this work, the activities of important pectinolytic enzymes involved in the degradation of the cell wall, and consequently the loss of firmness, namely pectin methylesterase (PME), polygalacturonase (PG) and β -Galactosidase (β -Gal), were monitored during two ripening stages (commercial and consumption) in 10 apricot clones. The overall results suggested that the maturation of the apricots was coordinated by the three pectinolytic enzyme activities, since PME, PG and β -Gal activities increased during ripening while fruit flesh firmness decreased. In addition, the results showed that apricot softening was more controlled by β -galactosidase and PME.

Biography:

Jamal Ayour has completed his PhD at the age of 28 years from Avignon University (France / Agronomic Science) and Marrakech University (Morocco / Biotechnology and Food science). He has published 5 papers in reputed journals, 7 participations in international congresses and he has been serving as an editorial board member of repute.

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