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Identification and quantification of phenolic compounds in 'Rocha' pear after long-CA storage

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The variation of some phenolic compounds in pears during controlled atmospheres (CA) conservation might be used as an indicator of possible changes in their quality after storage eg. colour degradation.

'Rocha' pears, Portuguese variety harvested in 1997, were stored at 0°C and 90-95% RH. Four CA conditions with two levels of O2: 2% and 4% each one with 0.5% and 1.5% of CO2 were established. Pears stored in air were used as a control. After 7 and 9 months of storage, pears were removed from storage and exposed at room temperature.

Arbutin, chrologenic acid and some other caffeoylquinic acid derivatives were identified and quantified by HPLC.

The objective of this study was to evaluate the phenolic compounds present in pears in order to know the effect that different CA compositions could have on their levels.