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Quality Evaluation of Tomato (cv. Buffalo) Stored Under Controlled Atmosphere

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ABSTRACT

Greenhouse-grown pink tomatoes (cv. Buffalo) were stored under air or controlled atmosphere (CA), 4% O₂ and 2% CO₂, to study the effect of CA at chilling and nonchilling temperatures on quality characteristics of fruits. Tomatoes could be stored at 12C under CA for three weeks with no major changes in fruit appearance. CA seems effective in delaying color development and tomato ripening at this temperature. The soluble solids content was lower under CA storage and no significant differences in firmness, pH or citric acid were observed between storage under air or CA. Controlled atmosphere at 12C was also effective in reducing decay. Fruits showed high incidence of decay for both storage under air or CA at 6C. CA did not alleviate chilling injury symptoms relative to air stored samples at 6C. Water loss was greatly increased under CA.

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