

Title Influence of 1-methylcyclopropene vacuum infiltration on respiration and ethylene production in tomato fruits

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Abstract

A standard method to treat fruits with 1-methylcyclopropene (1-MCP) is to close the fruits for a relatively long time with the 1-MCP gas at the atmospheric pressure so that the gas diffuses into the fruits. In this study, 1-MCP gas was vacuum-infiltrated into the tomato fruits within a short time and the treatment efficiency was evaluated by measuring the changes of respiration and ethylene production rates. By the forced infiltration of 1-MCP, respiration rate was reduced proportional to the treated 1-MCP concentrations and inversely proportional to the applied vacuum pressures.