

# Effect of 1-MCP on cactus pears stored at 20°C

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## Abstract

This study was carried out to assess the effect of 1-methylcyclopropene (1-MCP), an inhibitor of ethylene receptors, on physiological activity and quality traits of cactus pears. Fruit of the first crop were exposed to 400 ppb 1-MCP at 20°C for 24 h and then stored at 20°C and 60% RH for 2 weeks. Treated fruit showed significant increases in respiration activity, ethylene production rates at the end of the treatment with respect to control fruit; thereafter both respiration activity and ethylene production decreased with values constantly slightly higher in 1-MCP treated fruit than control fruit. 1-MCP hastened fruit ageing, stimulated detachment of the piece of cladode left at harvest at the stem end and slightly increased transpiration rate. The exposure to 1-MCP made the fruit more susceptible to microbiological spoilage; after 2 weeks of storage decay incidence in treated fruit was 16% while in control fruit was 11%. Based on results of this study, 1-MCP does not seem a suitable means to improve the shelf-life of cactus pears.