**Title** Methyl jasmonate in conjunction with ethanol treatment increases antioxidant capacity, volatile compounds and postharvest life of strawberry fruit

**Author** J. Fernando Ayala-Zavala, Shiow Y. Wang, Chien Y. Wang and Gustavo A. González-Aguilar

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**Abstract**

The antioxidant capacity, total anthocyanins, total phenolics, volatile compounds, and postharvest quality of strawberry fruit were evaluated after treatment with natural antimicrobial compounds and during storage at 7.5 °C. Strawberries treated with methyl jasmonate (MJ) in conjunction with ethanol (MJ-ETOH) showed higher antioxidant capacity, total phenolics, and anthocyanins than those treated with ethanol or control (non-treated). MJ-ETOH and ethanol treatments also increased volatile compounds during storage period. However, individual volatile compounds were affected differently. Methyl acetate, isoamyl acetate, ethyl hexanoate, butyl acetate, and hexyl acetate increased, while ethyl butanoate, 3-hexenyl acetate, and methyl hexanoate decreased during storage. The postharvest life was longer for those berries treated with MJ-ETOH and MJ than for those treated with ethanol or control fruit. In conclusion, strawberries treated with MJ-ETOH maintained an acceptable overall quality for the longest storage duration and retained higher levels of volatile compounds; also, berries treated with MJ showed the highest antioxidant capacity compared with other treatments during the postharvest period.