

**Title** Methyl jasmonate enhances biocontrol efficacy of *Rhodotorula glutinis* to postharvest blue mold decay of pears

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#### **Abstract**

The effect of *Rhodotorula glutinis* treatment alone or in combination with methyl jasmonate (MeJA) in controlling blue mold decay, the natural fungal decay of pears and the postharvest quality parameters including fruit firmness, total soluble solids, titratable acidity, and ascorbic acid were investigated. The combination of methyl jasmonate (200  $\mu$ M) and *R. glutinis* ( $1 \times 10^8$  CFU/ml) was a more effective approach to reduce the disease incidence and lesion diameter of blue mold decay of pears than the application of MeJA or *R. glutinis* alone after incubation for 7 d at 20 °C. The natural fungal decay of pears treated with the application of *R. glutinis* combined with MeJA resulted in reduced average decay incidence of 10.42% or 4.16%, respectively, compared with 27.17% or 20.83% in the control fruits following storage at 20 °C for 15 d or 4 °C for 60 d followed by 20 °C for 15 d. The combined treatment did not impair quality parameters of fruits under both conditions.