

Title Combination of salicylic acid and ultrasound to control postharvest blue mold caused by *Penicillium expansum* in peachfruit

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Abstract

The effect of ultrasound (40 kHz, 10 min) and salicylic acid (SA, 0.05 mM) either separately, or combined on blue mold caused by *Penicillium expansum* in peachfruit was investigated. The results showed that the application of SA alone could reduce blue mold, while the use of ultrasound had no effect. Our results also revealed that SA combined with ultrasound treatment was more effective in inhibiting fungal decay during storage than the SA treatment alone. The combined treatment increased the activities of defense enzymes such as chitinase, β -1,3-glucanase, phenylalanine ammonia-lyase, polyphenol oxidase and peroxidase, which were associated with higher disease resistance induced by the combined treatment. Furthermore, the combined treatment did not impair the quality parameters of peachfruit after 6 days of storage at 20 °C. These results suggested that the combination of ultrasound and SA treatment may be a useful technique to reduce blue mold in peachfruit.