

Title Commercial testing of *Kloeckera apiculata*, isolate 34-9, for biological control of postharvest diseases of citrus fruit

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Abstract

The efficacy of the yeast *Kloeckera apiculata* strain 34–9 to control the natural incidence of postharvest decay of citrus fruit under laboratory and commercial conditions was evaluated. Small-scale experiments with citrus fruit dipped into the yeast cell suspension were carried out to test its inhibitory effect, and the development of decay in citrus was effectively inhibited. The yeast was compatible with a low concentration of a commonly used fungicide. In packinghouse tests, combining the yeast with 40 mg/L MBC (Carbendazim) resulted in a reduction in the incidence of decay, caused by the green and blue moulds (*Penicillium digitatum* and *Penicillium italicum*, respectively), equal to a conventional fungicide treatment of 200 mg/L MBC. In commercial packinghouse tests, the efficacy of *K. apiculata* strain 34–9 could be maintained to be effective in controlling the decay of several cultivars under packing-house conditions at a cell concentration of the yeast antagonist 3×10^8 cells/mL. In all experiments, after storage at 5 °C for 90 days, *K. apiculata* strain 34–9 did not alter any quality parameters of fruit.

<http://www.springerlink.com/content/07n8209251j02879/fulltext.pdf>