Title	Savory essential oil effect on postharvest control of rhizopus rot on packaged peaches in poly ethylen films
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Abstract

Postharvest diseases limit the storage period and marketing life of peaches. Rhizopus rot, caused by Rhizopus stolonifer (Ehrenb. Fr) Vuill., is one of the most destructive postharvest diseases of stone fruits.The aim ofthis investigation was to evaluate the antifungal effects ofthe herbal essential oil of Savory (*Satureja hortensis*) against *Rhizopus stolonifer,* causal agent ofRhizopus rot on peach. *In vitro* trials, the activity of Savory oil was tested against pathogen mycelium growth. Essential oil was added to the medium (ranging from 120 to 360 µl/l), or to a filter paper (ranging from 1, 3, 6, 12, 24 and 48 µl/l) inserted on the lid of Petri dish to assay its volatility. In *in vivo* experiments, four concentrations of Savory oil (0, 120,240 and 360 µl/l) were tested by dipping and seven doses (0, 50, 100, 200, 400, 800 and 1600 µl/l) were applied as vapour phase on peaches cv 'V. H. Hale' artificially inoculated with the pathogen (10^6 conidia ml^{-1}). Fruit were stored at 25°C or 1°C for 20 and 45 days respectively. In *in vitro* results the concentrations of 360 µl/l used in medium and that of 24 µl/l used as volatile showed the highest activity against *Rhizopus* growth. *In vivo* trials, the most effective concentration of essential oil was 360 µl/l used by dipping and 24 µl/l used as biofumigant. More investigation are in progress to evaluate the practical application of Savory oil.