

Efficacy of essential oil vapour phase against post-harvest fungal pathogen *Penicillium digitatum* isolated from *Citrus reticulata*

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The present study envisages the efficacy of essential oils (EOs) namely basil oil, ginger oil and lavender oil for management of decay of *Citrus reticulata* with an objective to impede major post-harvest diseases and to prolong the storage life without altering any fruit quality parameter. The research is being strategized in view of getting alternative post-harvest solution for organic value chain. An antifungal activity of essential oils against isolated fungus *Penicillium digitatum* was assessed by vapour phase activity. The results indicated that Ginger oil at the concentration of 80 $\mu\text{g ml}^{-1}$ showed strong mycelia growth inhibition followed by basil oil and lavender oil at concentration of 160 $\mu\text{g ml}^{-1}$, 480 $\mu\text{g ml}^{-1}$ respectively. An *in vivo* trial on *Citrus reticulata* also supported these results. At all the stages of storage, green mold decay was found less in EOs treated fruits than the untreated one and hence increased their storage life significantly.

Key words: *Citrus reticulata*, *Penicillium digitatum*, essential oils, vapour phase activity, ginger oil
