

Abstract

Pathogenic fungi are one of the main factors limiting crop production. Considering the harmful effects of chemical pesticide application of biological control, plant pathogen are a priority. One of the effective methods for controlling plant diseases is the use of herbal products with fungal properties such as herbal extracts and essential oils. For this purpose, after the extraction by moon breeding method, the plant species of Shiraz citrus, Eucalyptus chamomilla and Kakoti, were investigated in a completely randomized design with three replications and eight levels (0, 150, 250, 500, 750, 1000, 1500 and 2500 ppm) in laboratory conditions after adding extracts to the *Fusarium oxysporum* f.sp. *lycopersici*, *Alternaria alternata*, *Pythium aphanidermatum* and *Phytophthora melonis*. Ethanol was examined in a PDA medium. In the control treatment, only ethanol was used, then the greenhouse stage through potting and application of treatments including inoculation of the pathogens in four levels and inoculation of the extracts in three levels under a factorial experiment in a randomized complete block design with tomato plants of cultivar Plantae and cucumber were cultivars of Keyhan. Statistical analysis was performed using SAS version 9.1. Analysis of variance of radial growth of fungi showed that different concentrations of the treatments have an effective effect on the growth of the fungus colonies. The results showed that all radial growth of mycelium in the pathogenic fungi. By increasing the concentration of the extracts, the inhibitory percent of growth increases. The results of greenhouse studies showed that the amount of antioxidant activity of catalase and peroxidase increases when the pollen is spread to the patient. In fact, a primary resistance to the patient is created.

Keywords: Pathogenicity, Preventing from growth, Inhibition



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**Inhibitory effects of thyme, chamomile, eulalyptus and
ziziphora extracts growth of plant pathogenic fungi
Fusarium oxysporum f.sp. *lycopersici*, *Alternaria alternata*,
Pythium aphanidermatom and *Phytophthora melonis***

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