

## عنوان مقاله:

In vitro growth inhibition of *Aspergillus flavus*, the major producer of aflatoxin, using garden thyme (*Thymus vulgaris* L.) essential oil

## محل انتشار:

اولین همایش گیاهان دارویی و داروهای گیاهی (سال: 1394)

تعداد صفحات اصل مقاله: 12

## نویسنده:

Jafar Nikan - *Plant Protection Research Dept., Agricultural and Natural Resources Research Centre of Hamadan*

## خلاصه مقاله:

In this study the effect of garden time (*Thymus vulgaris*) essential oil on the growth of *Aspergillus flavus*, the major producer of aflatoxin, was evaluated in vitro. The assessment was done by conducting an experimental completely randomized design comprising of six treatments and four replications. The treatments were four concentrations of garden time essential oil (0.2, 0.6, 1 and 1.4 mg/ml) and two controls (Dimethyl sulfoxide and fungicide solutions). Each treatment was applied to the fungus by placing a paper disc, impregnated with each treatment, in the center of a plate of PDA medium inoculated with spore suspension of the fungus. Measuring the average radius of *A. flavus* growth inhibition zone around the impregnated paper discs indicated that compared to the negative control, all concentrations of garden time essential oil significantly inhibited the mycelial growth of the fungus. The highest radial growth inhibition zone (20.5 mm, 18 mm and 10.7 mm) were those of 1.4 mg/ml, 1 mg/ml and 0.6 mg/ml of garden thyme essentials, respectively which were significantly higher than that of the fungicide treatment. Moreover, the rate of growth inhibition was concentration dependent. Considering these results it seems that garden time essential oil is potentially a natural alternative for controlling *A. flavus* mold.

## کلمات کلیدی:

*Thymus vulgaris*, growth inhibition natural fungicide, essence

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/433530>

