

FUNGICIDAL ACTIVITY OF *Ocimum basilicum* L

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Basil (*Ocimum basilicum* L., Lamiaceae family) as an aromatic plant has been introduced worldwide, including of Uzbekistan. The aim of this study is to investigate the fungicidal activity of basil. An ethanol extract from basil with green leaves (cultivated in 2025 year) was obtained with a yield of 6,7% of the air dried mass. The fatty and volatile oil components of the extract were studied as described in publication [1]. The study involved the phytopathogen *Fusarium oxysporum*. The antibiotic activity of the extract from *O. basilicum* was assessed using Krasilnikov's paper disk method (disc diameter 1 cm). Sterile filter paper disks, 7-10 mm in diameter, were placed in Petri dishes on the surface of Czapek's nutrient medium seeded with test organisms. The antibiotic activity of extract was assessed based on the size of the sterile zones formed around the paper disks [2, 3]. Tebuconazole served as the standard. Measurements of the phytopathogen growth inhibition zone were performed on days 5 and 7 of cultivation.

The activity of the compounds was assessed based on the size of the phytopathogen growth inhibition zone. The triazole fungicide tebuconazole at a concentration of 0.05%, used in agriculture to protect field and grain crops from pathogenic fungi, was used as a standard.

Fungicidal activity of extract from *O. basilicum* against *Fusarium oxysporum* culture

Samples	Concentration, %	Growth inhibition zone on 5 th day growth, sm	Growth inhibition zone on 7 th day growth, sm
Extract of basil	1.0	0.75	0.57
Tebuconazole	0.05	1.85 cm	

The results shown that growth inhibition zone for extract of basil a concentration of 1% was 0.75 cm on day 5 and 0.57 cm on day 7. In the control variant using tebuconazole at a concentration of 0.05%, it was 1.85 cm (table). This extract contained 5.5% fatty oil. TLC analysis revealed that it contained unsaturated fatty acids (linolenic and linolic), their glycerol esters and lipophilic substances, including volatile oil components (linalool), pigments, and sterols previously discovered in basil [1]. Thus, the fungicidal activity of basil extract was studied for the first time. It was shown that the lipophilic extract, consisting of a complex of fatty and essential oils, exhibits activity against *Fusarium oxysporum* culture.

References

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