

**ANALISIS PERBANDINGAN DAYA HAMBAT EKSTRAK PIROLISIS DAN
EKSTRAK MASERASI DAUN TEMBAKAU (*Nicotiana tabacum L.*) VAR
VIRGINIA TERHADAP *Fusarium oxysporum* SECARA *IN VITRO***

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Abstrak

Fusarium oxysporum termasuk jamur non-dermatofita penyebab onikomikosis. Kasus infeksi jamur ini berisiko terjadi resistensi, karena jamur ini dapat bersifat refrakter pada obat antijamur yang biasa digunakan sehingga perlu dicari alternatif antijamur dengan pemanfaatan herbal, contohnya tembakau yang sudah pernah digunakan sebagai obat diabad ke-16. Ekstrak daun tembakau diketahui mampu menghambat pertumbuhan jamur. Tujuan penelitian ini agar mengetahui perbandingan antara ekstrak pirolisis dan ekstrak maserasi daun tembakau (*Nicotiana tabacum L.*) varian virginia secara *in vitro* dalam menghambat pertumbuhan *Fusarium oxysporum*. Sampel penelitian eksperimental ini adalah ekstrak pirolisis serta maserasi daun tembakau dengan berbagai konsentrasi (100%, 80%, 60%, 40%, dan 20%) serta menggunakan metode uji antijamur difusi sumuran dan mengamati apakah terbentuk zona hambat di sekitar sumuran. Analisis uji *Post Hoc Mann Whitney* dengan signifikansi $p < 0,05$ menandakan adanya perbedaan signifikan pada setiap konsentrasi dan uji *independent sample T-test* dengan nilai $p < 0,05$ terdapat perbedaan signifikan pada kedua ekstraksi. Zona hambat terbesar pada ekstrak pirolisis dengan rerata 45,06 mm sedangkan ekstrak maserasi 22,46 mm.

Kata Kunci: *Fusarium oxysporum*, antijamur, *Nicotiana tabacum*

**COMPARATIVE ANALYSIS OF THE INHIBITORY EFFECT OF
PYROLYSIS EXTRACT AND MACERATION EXTRACT OF TOBACCO
LEAVES (*Nicotiana tabacum L.*) VAR. VIRGINIA AGAINST *Fusarium
oxysporum* IN VITRO**

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Abstract

Fusarium oxysporum including non-dermatophyte fungus that causes onychomycosis. Cases of this fungal infection are susceptible to developing resistance, because this fungus can be refractory to commonly used antifungal drugs, so it's necessary to look for antifungal alternatives by using herbs, for example tobacco which was used as medicine in the 16th century. Tobacco leaves extract is known to inhibit the growth of fungi. This study aims to determine the comparison of inhibition between pyrolysis extract and maceration extract of tobacco leaves (*Nicotiana tabacum L.*) Virginia variant on fungal growth *Fusarium oxysporum* in *vitro*. The samples for this experimental study were pyrolysis extract and tobacco leaves maceration with various concentrations (100%, 80%, 60%, 40%, and 20%) and used the well-diffusion antifungal test method and observed whether an inhibition zone was formed around the wells. Analysis of the Post Hoc Mann Whitney test with a significance of $p < 0.05$ indicating a significant difference in each concentration and test independent sample T-test with a p value < 0.05 there was a significant difference in the two extractions. The largest inhibition zone was in the pyrolysis extract with an average of 45.06 mm while in the maceration extract it was 22.46 mm.

Key words: *Fusarium oxysporum*, antifungal, *Nicotiana tabacum*