

**PEMANFAATAN ASAP CAIR TEMPURUNG KELAPA UNTUK  
MENGENDALIKAN CENDAWAN PENYEBAB PENYAKIT  
ANTRAKNOSA DAN LAYU FUSARIUM PADA KETIMUN**  
*(Use of Liquid Smoke from the Destructively-Distilled Coconut Shell  
to Control the Fungi that Cause Anthracnose and Fusarium Wilt Diseases  
on Cucumber Plants)*

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**ABSTRACT**

The liquid smoke obtained from the destructive distillation on coconut shell) at 0,25-6,0% concentration-range could in vitro to inhibit the colony growth of fungi, i.e. *Colletotrichum gloeosporoides* and *Fusarium oxysporum* species as much as consecutively 5,59-97,85% and 6,06-94,97%. At 7% liquid-smoke concentration the inhibition reached 100% (for both species). The liquid smoke obtained from 400°C distillation temperature could inhibit fungi growth the most effectively, i.e. 16,26% for *Colletotrichum gloeosporoides* and 15,06% for *Fusarium oxysporum*. In vivo, the liquid smoke at 0,5%, 1%, and 5% concentration- was effective to repard (up to 100%) the anthracnose disease as well as fusarium-wilt that attacked the host cucumber plants. However, the liquid-smoke use at 5% was not recommended due to inflicting necrosis on cucumber leaves.

Keywords: Liquid smoke, destructive distillation, coconut shell, anti-fungal action, fungi-caused diseases, cucumber plants

**ABSTRAK**

Asap cair hasil destilasi kering tempurung kelapa pada konsentrasi antara 0,25-6,0% mampu menghambat pertumbuhan koloni cendawan baik pada *Colletotrichum gloeosporoides* maupun *Fusarium oxysporum*. Penghambatan asap cair pada koloni *Colletotrichum gloeosporoides* dan *Fusarium oxysporum* masing-masing sebesar 5,59-97,85% dan 6,06-94,97%. Penghambatan sampai 100% untuk kedua cendawan, dimulai pada konsentrasi 7%. Asap cair yang dihasilkan dari pemanasan 400°C menunjukkan hambatan koloni cendawan paling tinggi, yaitu sebesar 16,26% untuk *Colletotrichum gloeosporoides* dan 15,06% untuk *Fusarium oxysporum*. Hasil uji *in vivo* menunjukkan bahwa asap cair dengan konsentrasi 0,5%, 1% dan 5%, efektif menghambat perkembangan penyakit antraknosa dan layu fusarium, sampai 100%. Meskipun demikian, asap cair dengan konsentrasi 5% tidak dianjurkan, karena dapat menyebabkan nekrosis pada daun ketimun.

Kata kunci : Asap cair, destilasi kering, tempurung kelapa, antifungi, fungi penyebab penyakit, ketimun