

“EFEKTIVITAS MINYAK ATSIRI BUAH JERUK LEMON (*Citrus limon (L) burm.f*) DALAM MENGHAMBAT PERTUMBUHAN *Candida albicans*”

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ABSTRAK

Latar Belakang: Kolonisasi *Candida* pada individu normal terdapat dalam jumlah yang kecil. Pada individu yang mengalami *immunocompromised*, *Candida albicans* dapat mengalami pertumbuhan berlebih yang menyebabkan infeksi dalam rongga mulut. Infeksi pada rongga mulut yang disebabkan oleh *Candida albicans* disebut Kandidiasis oral. Buah jeruk lemon (*Citrus Limon (L) Burm.f.*) banyak mengandung senyawa bioaktif, seperti flavonoids, limonoids, asam fenol, kumarins, furocumarins, karotenoid, tannin, terpenoid, dan minyak atsiri yang berfungsi sebagai antibakteri, antivirus, antioksidan, antifungal, analgesic dan anti-inflamasi. Kandungan minyak atsiri pada jeruk lemon berupa limonene yang memiliki aktivitas antibakteri dan antijamur. Yaitu dapat menimbulkan reaksi dengan komponen dinding sel jamur yang dapat menyebabkan kerusakan dinding sel jamur. **Tujuan:** Mengetahui efektivitas minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) konsentrasi 100% dalam menghambat pertumbuhan *Candida albicans*. **Metode:** Penelitian eksperimental laboratorium dengan desain *post test only control group design*. Pengujian efektivitas minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) dalam menghambat pertumbuhan *Candida albicans* dengan metode sumuran, minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) dibuat menggunakan teknik destilasi uap air konsentrasi 100% dan kontrol positif ketokonazol. Pengulangan dilakukan sebanyak 16 kali kemudian pengamatan zona hambat. **Hasil:** Minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) konsentrasi 100% efektif dalam menghambat pertumbuhan *Candida albicans*. minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) konsentrasi 100% memiliki zona hambat terhadap jamur *Candida albicans* lebih efektif dibandingkan dengan zona hambat kontrol positif (ketokonazol) dengan rerata zona hambat minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) sebesar 15-17,78 mm. **Kesimpulan:** Minyak atsiri buah jeruk lemon (*Citrus limon (L) burm.f*) konsentrasi 100% efektif dalam menghambat pertumbuhan *Candida albicans*.

Kata kunci : Minyak atsiri, buah jeruk lemon (*Citrus limon (L) burm.f*), *Candida albicans*, zona hambat

"EFFECTIVENESS OF ESSENTIAL OILS OF CITRUS FRUIT LEMON (*Citrus limon* (L) burm.f) INHIBIT GROWTH IN *Candida albicans*"

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ABSTRACT

Background: *Candida* colonization in normal individuals present in a small amount.. In individuals who are immunocompromised, *Candida albicans* may experience overgrowth that causes infection in the oral cavity. Oral infection caused by *Candida albicans* called oral candidiasis. Lemon (*Citrus Limon* (L) *Burm.f.*) contains many bioactive compounds, such as flavonoids, limonoids, fenol acid, kumarins, furocumarins, carotenoids, tannins, terpenoids, and essential oil which acts as an antibacterial, antiviral, antioxidant, antifungal, analgesic and anti-inflammatory. The content of essential oils in lemon form of limonene which has antibacterial and antifungal activity. That can cause a reaction with a component of the fungal cell wall that can cause damage to the cell walls of fungi. **Aim:** To determine the effectiveness of essential oil of lemon (*Citrus limon* (L) *burm.f*) 100% concentration to inhibit the growth of *Candida albicans*. **Methods:** The study is an experimental laboratory with post test only control group design. The effectiveness of essential oil of lemon (*Citrus limon* (L) *burm.f*) by tested in inhibiting the growth of *Candida albicans* by pitting method, essential oil lemon (*Citrus limon* (L) *burm.f*) concentration of 100% made using steam distillation technique and ketoconazole as a positive control. Repetition had done 16 times later observations inhibition zone. **Results:** Essential oil of lemon (*Citrus limon* (L) *burm.f*) concentration of 100% equally effective in inhibiting the growth of *Candida albicans*. Essential oil of lemon (*Citrus limon* (L) *burm.f*) concentration of 100% had inhibitory zone against *Candida albicans* fungus was more effective at inhibition zone compared with the positive control (ketoconazole) with a mean inhibition zone lemon essential oil (*Citrus limon* (L) *burm.f*) of 15 to 17.78 mm. **Conclusion:** Essential oil of lemon (*Citrus limon* (L) *burm.f*) concentration of 100% effective in inhibiting the growth of *Candida albicans*.

Keywords : Essential oils, lemon (*Citrus limon* (L) *burm.f*), *Candida albicans*, inhibition zone