

EFEKTIVITAS KANDUNGAN ALKOHOL PADA *HAND SANITIZER* TERHADAP PERBANDINGAN JUMLAH KOLONI BAKTERI DI TELAPAK TANGAN

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Abstrak

Penyakit infeksi dan penyakit menular masih menjadi masalah yang dihadapi oleh negara-negara berkembang. Kebersihan tangan merupakan komponen terpenting dari kewaspadaan dan merupakan metode yang paling efektif dalam mencegah penularan patogen yang berhubungan dengan pelayanan kesehatan. Efektivitas suatu antiseptik dipengaruhi oleh beberapa hal diantaranya kandungan dan kadar bahan aktif. Penelitian ini bertujuan untuk mengetahui perbedaan efektivitas kandungan alkohol pada beberapa *hand sanitizer* terhadap perbandingan jumlah koloni bakteri di telapak tangan. Jenis penelitian ini adalah analitik eksperimental dengan jumlah responden 25 orang. Data dianalisis dengan Kruskal-Wallis dan Mann Whitney. Hasil analisis univariat menunjukkan semakin tinggi kadar alkohol pada *hand sanitizer* maka semakin tinggi efektivitasnya. Kemampuan alkohol sebagai antibakteri melalui denaturasi protein dan melarutkan lemak pada dinding sel, hal ini menyebabkan kerusakan pada membran sel bakteri dan inaktivasi enzim-enzim.. Kandungan antimikroba yang semakin meningkat menyebabkan kemampuannya dalam membunuh mikroba juga semakin meningkat. Hasil uji Mann Whitney menunjukkan tidak didapatkan perbedaan efektivitas yang bermakna antara *hand sanitizer* dengan kandungan alkohol 57%, 60%, 68% dan 70%. Perbedaan yang tidak bermakna disebabkan oleh konsentrasi alkohol yang tidak signifikan antar kelompok *hand sanitizer*. Komposisi *hand sanitizer* perlu dipertimbangkan agar dalam pemakaiannya benar-benar efektif terhadap penurunan jumlah angka bakteri.

Kata kunci: *Hand sanitizer*, alkohol, koloni bakteri

EFFECTIVENESS OF THE ALCOHOL CONTENT ON THE HAND SANITIZER TOWARD THE NUMBER OF THE COLONIES BACTERIA ON PALMS

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Abstract

Infectious and transmitted diseases are still a problem that is faced by developing countries. Hand hygiene is the most important component of alertness and constitute the most effective method in preventing the transmission of pathogens that associate with health care. The effectiveness of an antiseptic is influenced by several things including the content and value of active material. This present study was aimed to find the differences in effectiveness of the alcohol content on in some hand sanitizer toward the number of the colonies bacteria on palms. This type of study was experimental analytic with 25 respondents. Data were analyzed with the Kruskal-Wallis and Mann Whitney test. The results of the univariate analysis showed that the higher level of alcohol in the hand sanitizer, the higher the effectiveness. The ability of alcohol as an antibacterial through protein denaturation and dissolve lipid in the cell wall, causing damage to the cell membranes of bacteria and inactivation of enzymes. The increase of antimicrobial content caused increasing in its ability to kill microbes. The Mann Whitney test results showed that there was no significant difference among the effectiveness of hand sanitizer with alcohol content of 57%, 60%, 68% and 70%. A not significant difference was caused by differences in the concentration of alcohol was not significant between groups of hand sanitizer. The composition of hand sanitizer should be considered so that the use of hand sanitizer is really effective to decrease the total number of bacteria.

Keywords: Hand sanitizer, alcohol, colonies of bacteria