

ABSTRAK

PENGARUH PENGECERAN SENYAWA *BENZALKONIUM CHLORIDE* (BKC) KONSENTRASI 0,4% TERHADAP PENURUNAN ANGKA *TOTAL PLATE COUNT* (TPC) BAKTERI PADA *GLOVES NON-STERILE* PRE-OPERASI

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Benzalkonium chloride (BKC) adalah senyawa yang digunakan sebagai disinfektan dan antiseptik. Senyawa ini banyak digunakan sebagai bahan sterilitas di pelayanan medis. Penelitian ini bertujuan untuk menguji efektivitas dari senyawa *Benzalkonium chloride* 10% yang dilakukan pengenceran hingga 0,4% dalam menurunkan jumlah bakteri pada *gloves non-sterile*. Alat yang digunakan yaitu *UV Lamp*, pinset, bak medis, nampan, kertas mika, gunting, gelas beaker, tabung konikel, spuit 60 cc, rak tabung reaksi, bunsen spiritus, dan *timer lab*. Bahan yang digunakan terdiri dari Destan disinfektan yang mengandung BKC 10%, *cotton bud swabs* steril, *alcohol antiseptic* 70%, air, *gloves non-sterile*, mancis, NaCl, sabun, dan tisu. Metode yang dilakukan adalah uji *Equipment Swab* pada sampel *gloves* yang direndam dalam larutan BKC 0,4% selama 10 detik, 5 menit, serta kontrol tanpa diberi perlakuan, kemudian dilakukan perhitungan *Total Plate Count* (TPC). Hasil perhitungan *Total Plate Count* (TPC) menunjukkan perubahan penurunan pertumbuhan bakteri. Sampel yang direndam selama 10 detik memiliki rata-rata sebesar 92,875 CFU/cm², sampel yang direndam selama 5 menit sebesar 75,375 CFU/cm², dan sampel kontrol sebesar 198,250 CFU/cm². Tidak terdapat perbedaan yang cukup nyata antara waktu perlakuan terhadap penurunan jumlah bakteri.

Kata kunci: *Benzalkonium chloride*, disinfektan, antiseptik, waktu perendaman, *Total Plate Count* (TPC).

ABSTRACT

THE EFFECT OF DILUTION OF *BENZALKONIUM CHLORIDE* (BKC) COMPOUND IN 0,4% CONCENTRATION ON REDUCING THE TOTAL PLATE COUNT (TPC) OF BACTERIA IN PRE-OPERATIVE NON-STERILE GLOVES

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Benzalkonium chloride (BKC) is a compound used as a disinfectant and antiseptic. This compound is widely used as a sterilizing agent in medical services. This study aims to test the effectiveness of the *Benzalkonium chloride* 10% diluted to 0.4% in reducing the number of bacteria on non-sterile gloves. The equipments used are UV lamp, tweezers, stainless medical tub, tray, mica paper, scissors, beaker glass, conical tube, 60 cc syringe, test tube rack, bunsen burner, and timer. The materials used are Destan disinfectant containing 10% BKC, sterile cotton swabs, 70% antiseptic alcohol, water, non-sterile gloves, lighter, NaCl, soap, and tissue. The method used is the Equipment Swab test on glove samples soaked in 0.4% BKC solution for 10 seconds, 5 minutes, and an untreated control. Then, the Total Plate Count (TPC) is calculated. The results of the Total Plate Count (TPC) calculation showed a change in the reduction of bacterial growth. Samples soaked for 10 seconds had a mean of 92.875 CFU/cm², samples soaked for 5 minutes had 75.375 CFU/cm², and control samples had 198.250 CFU/cm². There was no significant difference between the treatment times in reducing the number of bacteria.

Keywords: *Benzalkonium chloride*, disinfectant, antiseptic, soaking time, Total Plate Count (TPC).