

Abstrak

Formulasi dan Pengaruh Pengusapan Tisu Basah Kombinasi Ekstrak Kulit Nanas Dan Kitosan Sebagai Tisu Disinfektan Terhadap Aktivitas Antibakteri dan Iritasi

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Latar Belakang: Penggunaan tisu basah merupakan alternatif yang dapat diterima untuk membersihkan toilet umum, casing handphone, jam tangan, tombol lift, dalam membunuh bakteri pada permukaannya. Kombinasi ekstrak kulit nanas 50% b/v dan kitosan 1% b/v (ratio 1:1) memenuhi KBM dan menunjukkan kematian bakteri. Penelitian ini bertujuan mengetahui formulasi dan pengaruh pengusapan tisu basah kombinasi ekstrak kulit nanas dan kitosan terhadap aktivitas antibakteri dan iritasi.

Metodologi: Penelitian ini meliputi pembuatan larutan Ekstrak kulit nanas 50% b/v dikombinasikan dengan kitosan 1% b/v (ratio 1:1). Kemudian mengimmobilisasi larutan kombinasi pada serat viselin, tisu wajah dan tisu makan. Dilakukan uji determinasi, identifikasi enzim, uji pH, Uji immobilisasi serat tisu, uji aktivitas antibakteri dan iritasi. Data disajikan berupa tabel dan gambar dianalisis secara deskriptif.

Hasil Penelitian: Uji identifikasi menunjukkan kulit nanas positif mengandung enzim bromelin. Berdasarkan uji immobilisasi serat tisu yang paling bagus adalah serat viselin. Tisu basah kombinasi memiliki rerata pH $4,16 \pm 0,0417$. Pengusapan menggunakan tisu basah kombinasi dapat membunuh bakteri pada permukaan objek lebih baik dibanding tisu basah komersil ditandai tidak adanya pertumbuhan bakteri pada media MHA dan tidak mengiritasi kulit.

Kesimpulan: Tisu basah kombinasi ekstrak kulit nanas dan kitosan dapat diformulasikan sebagai tisu disinfektan yang membunuh bakteri dan tidak mengiritasi kulit.

Kata Kunci: Tisu basah, Kulit Nanas, kitosan, disinfektan

Abstract

Formulation and Wiping Effect of Wet Wipe Combination of Pineapple Skin Extract and Chitosan as Disinfectant Wipes on Antibacterial and Irritation Activities

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Background: The use of wet wipes is an acceptable alternative for cleaning public toilets, cellphone casings, watches, elevator buttons, in killing bacteria on its surface. The combination of pineapple peel extract 50% w / v and chitosan 1% w / v (ratio 1: 1) fulfills MIC and shows bacterial death. The aim of this study was to determine the formulation and wiping effect of wet tissue using pineapple skin extract and chitosan on antibacterial activity and irritation

Methods: This research involved making pineapple skin extract solution 50% w / v combined with 1% w / v chitosan (ratio 1: 1). Then immobilize the combined solution on viselin fibers, facial tissues and eating tissues. Tests carried out are determination, enzyme identification, pH test, tissue fiber immobilization test, antibacterial activity test and irritation test. Data is presented in the form of tables and figures and then analyzed descriptively.

Results: Identification test showed positive pineapple skin containing bromelin enzyme. Based on tissue fiber immobilization test, the best is viselin fiber. Combination wet wipes have a mean pH of 4.16 ± 0.0417 . Wipe using a combination of wet tissue can kill bacteria on the surface of the object better than commercial wet tissue characterized by the absence of bacterial growth on the MHA media and does not irritate the skin.

Conclusion: Wet tissue combination of pineapple skin extract and chitosan can be formulated as a disinfectant tissue that kills bacteria and does not irritate the skin.

Keywords: Wet wipe, Pineapple skin, chitosan, disinfectant