

ABSTRAK

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PEMBUATAN SABUN PADAT NATURAL BERBASIS *ECO ENZYME*

Karya Tulis Ilmiah, Fakultas Ilmu Kesehatan (2023)

(XII + 57 Halaman; 22 tabel; 2 gambar; 20 lampiran)

Berbagai macam infeksi yang disebabkan oleh bakteri patogen, virus dan juga jamur disebabkan karena kurangnya pola hidup bersih yang diterapkan oleh masyarakat salah satu penyakit yang dapat ditimbulkan adalah diare yang disebabkan oleh *Escherichia coli*. Infeksi tersebut dapat berkurang dengan menggunakan sabun yang tepat. *Eco enzyme* merupakan salah satu hasil fermentasi dari limbah/sampah organik yang memiliki manfaat bagi tanaman dan bagi tubuh manusia. Oleh karena itu, penelitian ini bertujuan untuk membuat sediaan sabun padat natural berbasis *Eco enzyme* yang memenuhi persyaratan mutu sediaan sabun padat. Sediaan sabun padat awalnya dibuat dengan mengoptimasi basis mana yang lebih baik antara bentonit atau kaolin lalu selanjutnya dilakukan uji jumlah NaOH untuk mengoptimasi karakteristik sabun yang lebih baik. Selanjutnya dilakukan uji antibakteri *Eco enzyme* yang digunakan terhadap bakteri *Escherichia coli* lalu dilakukan formulasi sabun padat, kemudian uji standar SNI sabun. Berdasarkan hasil uji antibakteri, supernatan *eco enzyme* kulit jeruk memiliki aktifitas antibakteri yang lebih baik daripada *crude eco enzyme* kulit jeruk terhadap bakteri *Escherichia coli*. Hasil uji SNI sabun memenuhi syarat pada uji kadar air, uji total lemak, uji asam lemak bebas uji pH, uji stabilitas busa. Sedangkan pada uji bahan tidak larut dalam etanol, uji kadar klorida dan uji lemak tidak tersabunkan tidak sesuai dengan persyaratan SNI.

Kata Kunci: *Eco enzyme*, sabun padat natural, *Escherichia coli*

Referensi: 48 (2003-2023)

ABSTRACT

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MAKING OF NATURAL SOLID SOAP BASED ON ECO ENZYME

Thesis, Faculty of Health Sciences (2023)

(XII + 57 pages; 5 tables; 2 pictures; 20 appendices)

Various kinds of infections caused by pathogenic bacteria, viruses and fungi are caused by the lack of a clean lifestyle adopted by the community. One of the diseases that can be caused is diarrhea caused by Escherichia coli. The infection can be reduced by using the right soap. Eco enzyme is one of the fermented products of organic waste/waste that has benefits for plants and for the human body. Therefore, this study aims to make natural solid soap preparations based on Eco enzyme that meet the quality requirements for solid soap preparations. Solid soap preparations were initially made by optimizing which base is better, between bentonite or kaolin, and then tested for the amount of NaOH to optimize the characteristics of a better soap. Furthermore, the Eco enzyme antibacterial test was carried out which was used against Escherichia coli bacteria then a solid soap formulation was carried out, then a soap SNI standard test was carried out. Based on the results of the antibacterial test, the orange peel eco enzyme supernatant had better antibacterial activity than the orange peel crude eco enzyme against Escherichia coli bacteria. SNI test results for soap meet the requirements on the water content test, total fat test, free fatty acid test, pH test, foam stability test. Meanwhile, the test for materials insoluble in ethanol, test for chloride content and test for unsaponifiable fat did not comply with the requirements of SNI.

Keywords: Eco enzyme, natural solid soap, Escherichia coli (minimum of 3)

References: 48 (2003-2023)