

Abstract

Tirta Arizona Tarigan, Effect of Variations in KOH Solution on the Quality of Hand Washing Soap Made from a Mixture of Purified Palm Oil Cooking Oil and Clove Flower Extract (*Syzygium aromaticum* L). Supervised by Nur Ariyani Agustina, SST., M.Sc.

Soap is a surfactant that is used with water for washing and cleaning. Utilization of used palm cooking oil as a raw material for making liquid hand soap is an alternative in an effort to manage waste palm oil used. The addition of clove flower extract as an antiseptic adds to the value of its benefits. This study aims to determine the effect of variations in KOH solution on the quality of hand soap made from a mixture of purified palm cooking oil and clove flower extract (*Syzygium aromaticum* L). This study used a factorial Completely Randomized Design (CRD) with 30% KOH variation, namely 20 ml, 25 ml, 30 ml and 35 ml. Based on the results of the study, it can be concluded that the results of observing variations in KOH obtained test results; pH, foam height, foam stability, moisture content, saponification number and organoleptic. The best results were found in the 30% KOH variation, namely 25 ml, with an average standard pH of 10.46, initial foam height 8.5 cm, final foam height 8 cm, foam stability 90.83%, moisture content 56.5%, number saponification 70,125, organoleptic like having a slightly thick texture, and has a light brown color. Based on the results of the KOH variation above, it has met the standard for liquid hand soap (Indonesian national standard 06 – 3235-1994), namely the quality requirements for liquid hand soap.

Keyword : cooking oil; KOH; hand Soap

Abstrak

Tirta Arizona Tarigan, Pengaruh Variasi Larutan KOH Terhadap Kualitas Sabun Cuci Tangan Berbahan Baku Campuran Minyak Jelantah Kelapa Sawit Yang Dimurnikan Dan Ekstrak Bunga Cengkeh (*Syzygium aromaticum L*). Dibimbing oleh Nur Ariyani Agustina, SST., M.Si.

Sabun merupakan surfaktan yang digunakan dengan air untuk mencuci dan membersihkan. Pemanfaatan minyak jelantah kelapa sawit sebagai bahan baku pembuatan sabun cuci tangan cair merupakan alternatif dalam upaya pengelolaan limbah minyak jelantah kelapa sawit. Penambahan ekstrak bunga cengkeh sebagai antiseptik menambah nilai manfaatnya. Penelitian ini bertujuan untuk mengetahui pengaruh variasi larutan KOH terhadap kualitas sabun cuci tangan berbahan baku campuran minyak jelantah kelapa sawit yang di murnikan dan ekstrak bunga cengkeh (*Syzygium aromaticum L*). Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) satu faktorial dengan variasi KOH 30 % yaitu 20 ml, 25 ml, 30 ml dan 35 ml. Berdasarkan hasil penelitian dapat disimpulkan hasil pengamatan variasi KOH diperoleh hasil uji; pH, tinggi busa, stabilitas busa, kadar air, bilangan penyabunan dan organoleptik. Hasil terbaik terdapat pada variasi KOH 30% yaitu 25 ml, dengan rata rata pH standar 10,46, tinggi busa awal 8,5 cm, tinggi busa akhir 8 cm, stabilitas busa 90,83 %, kadar air 56,5 %, bilangan penyabunan 70,125, organoleptik seperti memiliki tekstur yang sedikit kental, dan memiliki warna coklat muda. Berdasarkan hasil variasi KOH di atas bahwa telah memenuhi standar untuk sabun cuci tangan cair (Standar nasional Indonesia 06 – 3235- 1994) yaitu syarat mutu sabun cuci tangan cair.

Kata kunci: minyak jelantah kelapa sawit ; KOH; sabun cuci tangan