

ABSTRAK

Penelitian ini bertujuan untuk mengetahui formulasi yang tepat serta efektivitas dari deodoran *spray* berbahan tawas dan ekstrak nilam aceh (*Pogostemon cablin* Benth.). Terdapat empat tahapan utama yaitu pra-distilasi, distilasi, formulasi dan uji sampel. Pada proses pra-distilasi, dilakukan maserasi dengan merendam 560 g daun dan 280 g batang nilam dengan perbandingan 2:1 dalam pelarut etanol 96% selama 4 hari kemudian dilanjutkan dengan distilasi vakum. Hasilnya, diperoleh rendemen sebesar 38,7%. Formulasi deodoran *spray* dilakukan dengan mencampur larutan tawas 5% dengan variasi konsentrasi nilam 10, 15 dan 20%. Pengujian sampel dilakukan melalui uji antibakteri, pH, organoleptik, daya tahan aroma, dan stabilitas. Uji antibakteri menunjukkan adanya zona hambat pada seluruh variasi deodoran, sehingga sediaan berhasil menghambat pertumbuhan bakteri *Staphylococcus aureus*, dengan rata-rata terbesar terdapat pada konsentrasi 10%, yaitu sebesar 8,21 mm. Uji pH menunjukkan bahwa seluruh variasi deodoran memenuhi SNI, yaitu pada pH 3, sehingga aman untuk digunakan. Pada uji organoleptik, diperoleh formulasi deodoran yang optimal, yaitu pada konsentrasi 15%. Pada uji daya tahan aroma, deodoran dengan konsentrasi 20% bertahan paling lama yaitu selama 14 menit. Uji stabilitas menunjukkan tidak terjadi perubahan yang signifikan pada daya tahan aroma. Sementara uji organoleptik dan pH tidak mengalami perubahan sama sekali. Dari hasil tersebut dapat disimpulkan bahwa deodoran *spray* yang optimal dari campuran tawas dan ekstrak nilam aceh diperoleh melalui formula 15% ekstrak nilam. Efektivitas dari deodoran ini dapat dikatakan baik, sesuai dengan hasil uji sampel. Kata kunci: deodoran, nilam, tawas

ABSTRACT

This study aims to determine the optimal formulation and effectiveness of a deodorant spray made from alum and aceh patchouli extract (*Pogostemon cablin* Benth.). There are four main stages, namely pre-distillation, distillation, formulation and sample testing. In the pre-distillation process, maceration was carried out by soaking 560 g patchouli leaves and 280 g stems with a ratio of 2:1 in 96% ethanol for 4 days and then followed by vacuum distillation. As a result, a yield of 38.7% was obtained. The deodorant spray formulation was carried out by mixing 5% alum solution with variations of 10, 15 and 20% patchouli concentrations. Sample testing was carried out through antibacterial, pH, organoleptic, scent staying power, and stability tests. The antibacterial test showed the presence of inhibition zones on all variations of deodorant, so that the preparation succeeded in inhibiting the growth of *Staphylococcus aureus* bacteria, with the largest average being at a concentration of 10%, which is 8.21 mm. The pH test showed that all variations of deodorant met SNI, namely at pH 3, so it is safe to use. In the organoleptic test, the optimal deodorant formulation was obtained, namely at a concentration of 15%. In the scent staying power test, deodorant with a concentration of 20% lasted the longest, namely 14 minutes. The stability test showed that there was no significant change in the scent staying power. While the organoleptic and pH tests did not change at all. From these results it can be concluded that the optimal deodorant spray from a mixture of alum and aceh patchouli extract is obtained through a formula of 15% patchouli extract. The effectiveness of this deodorant can be said to be good, according to the results of the sample test. Keywords: deodorant, patchouli, alum