

ABSTRACT

THE EFFECT OF A COCONUT SHELLS LIQUID SMOKE AND VANILLA ESSENTIAL OIL FORMULATION AS A BASE NOTES ON THE PHYSICAL AND SENSORY CHARACTERISTICS OF EAU DE PARFUM

By

Rebecca Nahashyea

Coconut shell liquid smoke is a condensation product obtained from the pyrolysis of coconut shells, composed of phenolic compounds with a sharp smoky aroma characteristic. The addition of liquid smoke combined with vanilla essential oil as base notes was expected to produce a harmonious smoky aroma characteristic in an Eau de Parfum (EDP) formulation. This study aimed to determine the effect of coconut shell liquid smoke and vanilla essential oil formulations as base notes on the physical and sensory characteristics of EDP. The study was conducted non-factorially using a Randomized Complete Block Design (RCBD) with 6 levels and 4 replications. The liquid smoke and vanilla essential oil formulations tested were P0 (0%:3%), P1 (0.3%:2.7%), P2 (0.6%:2.4%), P3 (0.9%:2.1%), P4 (1.2%:1.8%), and P5 (1.5%:1.5%). Homogeneity of variance was tested using Bartlett's test, and normality of the data was tested using the Tukey test. The data were analyzed using analysis of variance (ANOVA) to obtain an error variance estimator, followed by Duncan's Multiple Range Test (DMRT) at the 5% significance level. The best formulation was obtained at P2 (0.6%:2.4%), with physical characteristics of no staining, a specific gravity of 0.94, freedom from foreign particles, a homogeneous and clear solution, and a fragrance longevity of 5 hours. The sensory characteristics showed an aroma score of 2.90 (slightly smoky), a clarity score of 4.50 (very clear), and an overall acceptance score of 4.10 (liked).

Keywords: Eau de Parfum, liquid smoke, vanilla essential oil

ABSTRAK

PENGARUH FORMULASI ASAP CAIR TEMPURUNG KELAPA DAN MINYAK ATSIRI VANILA SEBAGAI *BASE NOTES* TERHADAP KARAKTERISTIK FISIK DAN SENSORI *EAU DE PARFUM*

Oleh

Rebecca Nahashyea

Asap cair tempurung kelapa merupakan hasil kondensasi uap dari proses pirolisis tempurung kelapa, yang tersusun atas senyawa fenolik dengan karakteristik aroma *smoky* yang tajam. Penambahan asap cair yang dikombinasikan dengan minyak atsiri vanila sebagai *base notes* diharapkan dapat menghasilkan karakteristik aroma *smoky* yang harmonis dalam formulasi EDP. Penelitian ini bertujuan untuk mengetahui pengaruh formulasi asap cair tempurung kelapa dan minyak atsiri vanila sebagai *base notes* terhadap karakteristik fisik dan sensori EDP. Penelitian ini dilakukan secara non faktorial dalam Rancangan acak Kelompok Lengkap (RAKL) dengan 6 taraf dan 4 ulangan. Formulasi asap cair dan minyak atsiri vanila, yaitu P0 (0%:3%), P1 (0,3%:2,7%), P2 (0,6%:2,4%), P3 (0,9%:2,1%), P4 (1,2%:1,8%). Kesamaan ragam data diuji dengan uji Barlett dan penambahan data dengan uji Tuckey. Data dianalisis menggunakan analisis ragam (ANARA) untuk memperoleh penduga ragam galat, kemudian diuji lanjut dengan DMRT 5%. Formulasi terbaik diperoleh pada perlakuan P2 (0,6%:2,4%) dengan karakteristik fisik berupa tidak ada noda, bobot jenis 0,94, bebas partikel asing, larutan homogen dan jernih, serta daya tahan wangi 5 jam. Karakteristik sensori berupa aroma 2,90 (agak *smoky*), kejernihan 4,50 (sangat jernih), dan penerimaan keseluruhan 4,10 (suka).

Kata-kata kunci: asap cair, *Eau de Parfum*, minyak atsiri vanila