

ABSTRACT

THE EFFECT OF COCONUT SHELL LIQUID SMOKE AND PINE (*Pinus sylvestris*) ESSENTIAL OIL FORMULATIONS ON THE PHYSICAL AND SENSORY CHARACTERISTICS OF EAU DE PARFUM

By

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Eau de Parfum (EDP) is a type of perfume containing approximately 15–20% aromatic compounds. This study aimed to analyze the effect of liquid smoke and pine essential oil formulations on the physical and sensory characteristics of EDP and to determine the best formulation that met the requirements of SNI 16-4949-1998. The study was designed using a Completely Randomized Block Design (CRBD) with a single factor, namely the ratio of liquid smoke and pine essential oil, consisting of six treatment levels: P0 (0:2%), P1 (0.3:1.7%), P2 (0.6:1.4%), P3 (0.9:1.1%), P4 (1.2:0.8%), and P5 (1.5:0.5%), with four replications. The observed parameters included sensory characteristics (aroma, clarity, and overall acceptance) and physical characteristics (spreadability, fragrance durability, staining, homogeneity, clarity, and specific gravity). Data were analyzed using analysis of variance (ANOVA) followed by Duncan's Multiple Range Test (DMRT) at a 5% significance level. The results showed that the formulation significantly affected the physical and sensory characteristics of EDP. The best formulation was obtained at P3 (0.9% liquid smoke : 1.1% pine oil), with moderate spreadability (± 100 cm), fragrance durability of more than 5 hours, no staining, a homogeneous and clear solution, and a density of 1.008 g/mL. The sensory characteristics included an aroma score of 4.67 (smoky), a clarity score of 4.21 (clear), and an overall acceptance score of 4.33 (liked).

Keywords: Eau de Parfum, liquid smoke, pine essential oil, smoky aroma

ABSTRAK

PENGARUH FORMULASI ASAP CAIR TEMPURUNG KELAPA DAN MINYAK ATSIRI PINUS (*Pinus sylvestris*) TERHADAP KARAKTERISTIK FISIK DAN SENSORI *EAU DE PARFUM*

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Eau de Parfum (EDP) merupakan salah satu jenis parfum yang memiliki konsentrasi senyawa aromatik sekitar 15–20%. Penelitian ini bertujuan untuk menganalisis pengaruh formulasi asap cair dan minyak atsiri pinus terhadap karakteristik fisik dan sensori EDP serta menentukan formulasi terbaik yang memenuhi standar SNI 16-4949-1998. Penelitian disusun menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan faktor tunggal yaitu perbandingan konsentrasi asap cair dan minyak atsiri pinus yang terdiri dari 6 taraf perlakuan, yaitu P0 (0:2)%, P1 (0.3:1.7)%, P2 (0.6:1.4)%, P3 (0.9:1.1)%, P4 (1.2:0.8)%, and P5 (1.5:0.5)% dan empat kali ulangan. Parameter yang diamati meliputi karakteristik sensori (aroma, kejernihan, dan penerimaan keseluruhan), karakteristik fisik (daya sebar, daya tahan wangi, noda, homogenitas dan kejernihan, serta berat jenis). Data dianalisis menggunakan analisis ragam (ANOVA) dan uji DMRT taraf 5%. Hasil penelitian menunjukkan bahwa formulasi berpengaruh nyata terhadap karakteristik fisik dan sensori EDP. Formulasi terbaik diperoleh pada P3 (asap cair 0,9% : minyak atsiri pinus 1,1%) dengan karakteristik fisik meliputi daya sebar sedang (± 100 cm), daya tahan wangi >5 jam, tidak ada noda, larutan homogen dan jernih, serta berat jenis 1,008 g/mL. Karakteristik sensori meliputi aroma dengan skor 4,67 (smoky), kejernihan 4,21 (jernih), dan penerimaan keseluruhan 4,33 (suka).

Kata kunci: *Eau de Parfum*, asap cair, minyak atsiri pinus, aroma *smoky*