PENGARUH PENAMBAHAN ARANG AKRIF DARI KULIT DURIAN (*Durio zibethinus*) TERHADAP SIFAT ANTIBAKTERI, SIFAT FISIK, DAN NILAI SENSORI PASTA GIGI HERBAL GAMBIR (*Uncaria gambir* Roxb) BERBASIS VCO (*Virgin Coconut Oil*)

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Pengaruh Penambahan Arang Aktif dari Kulit Durian (*Durio zibethinus*) Terhadap Sifat Antibakteri, Sifat Fisik, dan Nilai Sensori Pasta Gigi Herbal Gambir (*Uncaria gambir* Roxb.) Berbasis VCO (*Virgin Coconut Oil*)

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan arang aktif dari kulit durian terhadap sifat antibakteri, sifat fisik, dan nilai sensori pasta gigi herbal gambir. Rancangan percobaan yang digunakan pada penelitian ini adalah Rancangan Acak Lengkap (RAL) dengan lima perlakuan dan tiga ulangan. Data yang diperoleh kemudian dianalisis dengan ANOVA dan jika berbeda nyata dilanjutkan dengan uji Duncan's New Multiple Range Test (DNMRT) pada taraf 5%. Perlakuan pada penelitian ini adalah penambahan arang aktif dari kulit durian sebesar A (tanpa penambahan arang aktif), B (4%), C (8%), D (12%), E (16%) dari berat total bahan baku pembuatan pasta gigi. Berdasarkan hasil analisis kimia, fisik, sensori, dan antibakteri perlakuan terbaik diperoleh pada perlakuan C yaitu pasta gigi dengan penambahan arang aktif dari kulit durian sebanyak 8% dimana diperoleh nilai pH 7,48; tinggi busa 9,67mm, sediaan pasta gigi yang homogeny dengan aktivitas antibakteri sebesar 23,07mm, dan penilaian sensori terhadap kelembutan 3,84 (lembut), homogenitas 4,24 (homogen), warna 3,96 (suka), serta gumpalan 4,60 (tidak ada gumpalan).

Kata kunci : pasta gigi, arang aktif, kulit durian

Effect of Activated Charcoal Addition from Durian Peel (Durio zibethinus) on Antibacterial Properties, Physical Properties, and Sensory Value of VCO (Virgin Coconut Oil)-Based Gambir (Uncaria gambir Roxb.) Herbal Toothpaste

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ABSTRAK

This study aims to determine the effect of the addition of activated charcoal from durian peel on antibacterial properties, physical properties, and sensory value of gambir herbal toothpaste. The experimental design used in this study was a completely randomized design (CRD) with five treatments and three replicates. The data obtained were then analyzed by ANOVA and if significantly different followed by Duncan's New Multiple Range Test (DNMRT) at the 5% level. The treatment in this study was the addition of activated charcoal from durian peel by A (without the addition of activated charcoal), B (4%), C (8%), D (12%), E (16%) of the total weight of raw materials for making toothpaste. Based on the results of chemical, physical, sensory, and antibacterial analysis, the best treatment was obtained in treatment C, namely toothpaste with the addition of activated charcoal from durian peel as much as 8% where a pH value of 7.48 was obtained; foam height of 9.67mm, homogeneous toothpaste preparation with antibacterial activity of 23.07mm, and sensory assessment of softness 3.84 (soft), homogeneity 4.24 (homogeneous), color 3.96 (like), and lumps 4.60 (no lumps).

Keywords: toothpaste, activated charcoal, durian peel.