

**KARAKTERISTIK MINUMAN KAWA DAUN DENGAN PERBEDAAN  
WAKTU PENDINGINAN DAN JUMLAH HELAI DAUN KOPI ARABIKA  
MENGUNAKAN *MICROWAVE***

**TESIS**

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MENGUNAKAN *MICROWAVE***

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Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh waktu pengeringan, jumlah helai daun, dan interaksi keduanya terhadap karakteristik minuman kawa daun, serta mengetahui analisis kelayakan ekonomi industri minuman kawa daun kopi arabika. Penelitian ini menggunakan metode Rancangan Acak Lengkap (RAL) pola faktorial dengan 2 faktor. Faktor A waktu pengeringan selama 3, 7, dan 11 menit. Faktor B jumlah tumpukan daun 2, 4, 6, 8, dan 10 helai daun. Pengeringan daun kopi arabika menggunakan *microwave* dengan variasi waktu 3, 7, dan 11 menit dan jumlah tumpukan 2,4,6,8,dan 10 helai daun berpengaruh nyata terhadap total polifenol yang berkisar antara 37,46-45,56 mgGAE/g pada bubuk kawa daun dan 24,56-30,66 mgGAE/g pada seduhan kawa daun. Kadar kafein berkisar antara 0,65-0,88% pada bubuk kawa daun dan 0,25-0,71% pada seduhan kawa daun. Aktivitas antioksidan  $IC_{50}$  yang berkisar antara 50,82-66,57 ppm pada bubuk kawa daun dan 84,87-99,08 ppm pada seduhan kawa daun. Kadar air yang berkisar antara 3,34-7,05% pada bubuk kawa daun. Nilai pH yang berkisar antara 5,2-6,6 pada seduhan kawa daun, dan uji hedonik terhadap warna yang berkisar antara 3,1-4,95, aroma 3,1-4,4, dan rasa 3,1-4,8 pada minuman kawa daun. Namun berpengaruh tidak nyata terhadap total padatan terlarut seduhan kawa daun yang berkisar antara 0,5-1,3 °Brix. Nilai Break Even Point volume produksi yaitu 4.145 botol/tahun. Nilai BEP harga produksi Rp 3.598,8/L. Nilai R/C (Return Cost Ratio) 2,77 yang artinya ( $R/C > 1$ ) usaha layak untuk dilaksanakan.

Kata Kunci: daun kopi arabika, kawa daun, *microwave*, waktu pengeringan

**CHARACTERISTICS OF KAWA DAUN WITH DIFFERENCES IN DRYING  
TIME AND THICKNESS OF ARABICA COFFEE LEAVES USING  
MICROWAVE**

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**Abstract**

*This research aims to analyze the effect of drying time, number of strand leaves, and the interaction between the two on the properties of kawa leaf drinks, as well as determine the economic feasibility analysis of the Arabica coffee kawa leaf drink industry. This research used a factorial completely randomized design (CRD) method with 2 factors. Factor A drying time is 3, 7, and 11 minutes. Factor B is the number of leaf piles of 2, 4, 6, 8, and 10 leaves. Drying Arabica coffee leaves using a microwave with varying times of 3, 7, and 11 minutes and the number of piles of 2, 4, 6, 8, and 10 leaves had a significant effect on total polyphenols which ranged from 37.46-45.56 mgGAE/g in kawa leaf powder and 24.56-30.66 mgGAE/g in kawa leaf brew. Caffeine levels range from 0.65-0.88% in kawa leaf powder and 0.25-0.71% in kawa leaf brew. The IC<sub>50</sub> antioxidant activity ranged between 50.82-66.57 ppm in kawa leaf powder and 84.87-99.08 ppm in kawa leaf brew. The water content ranges from 3.34-7.05% in kawa leaf powder. The pH value ranges between 5.2-6.6 in kawa leaf brewing, and the hedonic test for color ranges between 3.1-4.95, aroma 3.1-4.4, and taste 3.1-4, 8 on kawa daun drink. However, it had no significant effect on the total dissolved solids of Kawa Daun brewing which ranged from 0.5-1.3 °Brix. Break Even Point value of production volume, namely However, it had no significant effect on the total dissolved solids of Kawa Daun brewing which ranged from 0.5-1.3 °Brix. Break Even Point value of production volume, namely However, it had no significant effect on the total dissolved solids of Kawa Daun brewing which ranged from 0.5-1.3 °Brix. Break Even Point value of production volume, namely 4,145 bottles/year. BEP value of production price IDR 3,598.8/L. The R/C (Return Cost Ratio) value is 2.77, which means (R/C > 1) the business is feasible to carry out.*

*Keywords: Arabica coffee leaves, kawa daun, microwave, drying time*