

SIFAT FISIKOKIMIA KOPI ARABIKA BAJAWA YANG DISEDUH DENGAN BERBAGAI METODE PENYEDUHAN

INTISARI

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Indonesia merupakan salah satu produsen utama kopi dunia yang unggul dalam menghasilkan kopi Arabika berkualitas tinggi, seperti Bajawa, dengan karakter cita rasa yang khas. Kualitas seduhan kopi sangat dipengaruhi oleh metode penyeduhan yang digunakan. Penelitian ini bertujuan untuk mengkaji pengaruh metode penyeduhan, berupa metode *espresso*, *cold brew*, V60, tubruk, dan *French press*, terhadap karakteristik fisikokimia kopi Arabika Bajawa. Hasil penelitian menunjukkan bahwa metode penyeduhan sangat dipengaruhi oleh kombinasi kondisi ekstraksi. *Espresso* memiliki warna paling gelap dengan nilai L, a*, b* berturut-turut adalah $23,35 \pm 1,78$; $3,11 \pm 0,21$; $5,79 \pm 0,65$ dan nilai *total dissolved solid* tertinggi ($7,01 \pm 0,37\%$), sedangkan V60 menunjukkan *extraction yield* tertinggi ($26,69 \pm 0,15\%$). Nilai pH tertinggi diperoleh *cold brew* ($4,97 \pm 0,05$), sedangkan *espresso* memiliki *total titratable acid* tertinggi ($10,70 \pm 1,47$ mL NaOH/15 mL sampel) akibat suhu dan tekanan tinggi yang meningkatkan pelepasan asam organik. *Espresso* menghasilkan aktivitas antioksidan ABTS dan FRAP ($99,47 \pm 0,83$ %RSA dan $84,84 \pm 6,69$ %RSA), *total phenolic content* ($8990,6629 \pm 941,2632$ mg GAE/L), kafein ($5788,1227 \pm 471,9466$ mg/L), asam klorogenat ($7272,6254 \pm 599,3580$ mg/L), dan asam kafeat ($278,7949 \pm 19,5088$ mg/L) paling tinggi, diikuti V60, lalu *cold brew*, tubruk, dan *French press* yang bersifat relatif sama. Penelitian menunjukkan bahwa *espresso* dan V60 lebih efektif dalam mengekstraksi komponen kimiawi, termasuk senyawa bioaktif. Sedangkan, *cold brew*, tubruk, dan *French press* unggul dalam menghasilkan seduhan kopi dengan sifat fisik yang ringan. Hasil penelitian ini memberikan informasi bermanfaat untuk menghasilkan seduhan kopi Bajawa berkualitas dengan sifat fisikokimia yang dipengaruhi oleh pilihan metode penyeduhan.

Kata kunci: kopi arabika Indonesia, kopi Bajawa, penyeduhan, sifat fisikokimia

PHYSICOCHEMICAL PROPERTIES OF BAJAWA ARABICA COFFEE BREWED USING VARIOUS BREWING METHODS

ABSTRACT

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Indonesia is one of the world's top coffee producers, known for producing high quality arabica coffee, such as Bajawa, with its unique flavor profile. Coffee brew quality is greatly influenced by the brewing method used. This study aims to examine the effect of brewing methods, consisting of espresso, cold brew, V60, *tubruk*, and French press, on the physicochemical characteristics of Bajawa specialty coffee. The results show that the brewing method is greatly influenced by the combination of extraction conditions. Espresso has the darkest color with L, a*, b* values of $23,35 \pm 1,78$; $3,11 \pm 0,21$; $5,79 \pm 0,65$, respectively, and the highest total dissolved solid value ($7,01 \pm 0,37\%$), while V60 showed the highest extraction yield ($26,69 \pm 0,15\%$). The highest pH value was obtained from cold brew ($4,97 \pm 0,05$), while espresso had the highest total titratable acidity ($10,70 \pm 1,47$ mL NaOH/15 mL sample) due to high temperature and pressure which increased the release of organic acids. Espresso produced the highest ABTS and FRAP antioxidant activities ($99,47 \pm 0,83$ %RSA and $84,84 \pm 6,69$ %RSA), total phenolic content ($8990,6629 \pm 941,2632$ mg GAE/L), caffeine ($5788,1227 \pm 471,9466$ mg/L), chlorogenic acid ($7272,6254 \pm 599,3580$ mg/L), and caffeic acid ($278,7949 \pm 19,5088$ mg/L) were the highest, followed by V60, then cold brew, *tubruk*, and French press, which were relatively similar. This study shows that espresso and V60 are more effective in extracting chemical components, including bioactive compounds. Meanwhile, cold brew, *tubruk*, and French press are superior at producing coffee brews with light physical properties. The results of this study provide insightful information for producing high quality Bajawa coffee brews with physicochemical properties influenced by the choice of brewing method.

Keywords: arabica coffee Indonesia, Bajawa coffee, brew, physicochemical properties