

***Quality And Hedonic Evaluation Of Aromatherapy Candles
With The Addition Of Arabica Coffee Grounds Oil (Coffea arabica L.)
From Espresso Brewing Residues***

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ABSTRACT

Coffee consumption in Indonesia continues to increase along with the growth of coffee shops, resulting in large amounts of coffee grounds waste. Most coffee grounds are disposed of in landfills and have the potential to pollute the environment due to their toxic compounds such as 2,1% alkaloids, 21,02% tannins, and 3,61-6,79 mg GAE/gram polyphenols. Coffee grounds still contain aromatic and volatile compounds that can be used as a base for aromatherapy candles. The aroma of coffee is known to have a relaxing effect, thus potentially being used as an alternative solution to reduce stress, including in students. The research was conducted from May to July 2025 at the Agricultural Product Processing Laboratory of the Jember State Polytechnic. The aromatherapy candles that have been made will be tested for quality in the form of melting point and burning time, as well as a hedonic test involving 30 panelists. The research used a non-factorial Randomized Block Design consisting of 5 treatments P0 = control, P1 = 6% coffee grounds oil + 1 g coffee grounds, P2 = 6% coffee grounds oil, P3 = 12% coffee grounds oil + 1 g coffee grounds, P4 = 12% coffee grounds oil. The results showed that differences in coffee grounds oil formulation significantly affected the quality of aromatherapy candles. The addition of coffee grounds oil lowered the melting point and extended the burning time, with the best treatment obtained at P4 (12% coffee grounds oil) which had the lowest melting point (54.75°C) and a longer burning time (15.36 hours/minute) compared to the control. The hedonic test showed that the treatment significantly affected the physical appearance, color, and overall, but did not significantly affect the aroma. Panelists preferred candles with the addition of 12% coffee grounds oil (P4) because it produced a smoother surface, uniform color, and better overall quality. In conclusion, P4 (12% coffee grounds oil) is the best treatment in producing aromatherapy candles with good quality and a high level of panelist acceptance.

Keywords: *Coffee Grounds, Aromatherapy Candles, Quality Test, Hedonic Test.*