

**UNLOCKING THE AROMATIC COMPOUND IN SPENT COFFEE GROUND (SCG)
POTENTIAL OF AROMATHERAPY CANDLES**

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ABSTRACT

UNLOCKING THE AROMATIC COMPOUND IN SPENT COFFEE GROUND (SCG) POTENTIAL OF AROMATHERAPY CANDLES

This study explores the viability of spent coffee grounds (SCG) as an eco-friendly source of aromatic compounds for aromatherapy candles, tackling the issue of waste associated with coffee production and the demand for sustainable fragrance options. The research objectives include identifying aromatic compounds within SCG extracts, evaluating their physicochemical characteristics, and assessing the effectiveness of SCG-based candles in enhancing user well-being. To achieve these goals, the study utilizes Gas Chromatography-Mass Spectrometry (GC-MS), Fourier Transform Infrared Spectroscopy (FTIR), and Total Phenolic Content (TPC) analysis for compound identification, along with controlled experiments and surveys involving students from Universiti Teknologi MARA (UiTM). Findings demonstrate that SCG can be effectively transformed into candles with beneficial aromatic properties, resulting in increased relaxation and decreased stress levels among participants. The study concludes by emphasizing the advantages of utilizing SCG, which not only aids in waste reduction but also offers a natural means of improving well-being, thereby supporting sustainability in the aromatherapy industry.

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