

PEPPERMINT (MENTHA PIPERITA) AND JAMAICAN CHERRY FRUITS (MUNTINGIA CALABURA) AS AN ALTERNATIVE ESSENTIAL OIL

ABSTRACT

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This study focuses on the development of an essential oil blend derived from peppermint (*Mentha piperita*) and Jamaican cherry (*Muntingia calabura*) fruits as a potential alternative to conventional essential oils. While peppermint is widely recognized for its therapeutic properties, the bioactive potential of Jamaican cherry remains relatively understudied. The primary objective of this research is to analyze the chemical composition of the formulated blend and evaluate its antimicrobial, antioxidant, and therapeutic properties. By utilizing locally sourced natural ingredients, the study promotes sustainable and eco-friendly practices in essential oil production, aligning with the increasing demand for natural alternatives in health, wellness, and related industries. The study adopted a quantitative-experimental research design and employed purposive sampling. Structured survey questionnaires were used as the main research instruments to evaluate the acceptability of the proposed essential oil blend based on the following criteria: ingredients and procedures, cooling effect, fragrance and aroma, color and consistency, and overall presentation. Percentages were utilized to describe the demographic composition of the expert evaluators, which included five (5) Chemists and five (5) Dermatologists. The weighted mean was applied to determine the average acceptability rating for each criterion. To examine significant differences in the evaluations between the two expert groups, an independent samples t-test was conducted. The analysis showed that the essential oil blend was rated as “acceptable” in terms of ingredients and procedures, cooling effect, fragrance and aroma, color and consistency, and presentation. The Chemists gave an overall weighted mean of 3.61, interpreted as “highly acceptable,” while the Dermatologists provided an overall mean of 3.22, interpreted as “acceptable.” The variance among Chemists’ responses was 0.031, compared to 0.716 among Dermatologists, indicating more consistency in the Chemists’ evaluations. With a computed t-value of 1.015, which is less than the critical t-value of 2.578 at a 0.01 significance level (two-tailed) and 2361 degrees of freedom, the results indicate no significant difference between the assessments of the two groups. To further enhance the product, respondents recommended using a dark-colored container, reducing the concentration of peppermint, slightly increasing the packaging size, and improving the font style and size for better visibility and overall presentation.

RECOMMENDED CITATION

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