

Lemongrass Blissful Touch: Balm with Lemongrass Oil and Peppermint Oil for Natural Relaxation and Pain Relief

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Abstract. Herbal-based topical products are increasingly developed as safe and effective alternatives for relaxation and pain relief. This study aims to develop a balm stick formulation using lemongrass essential oil combined with peppermint oil. Three formulations were prepared with variations of lemongrass oil concentrations of 2 mL, 4 mL, and 6 mL. The balm stick products were assessed by phytochemical screening, homogeneity, pH, spread ability, irritation, and hedonic tests. Phytochemical results showed that lemongrass oil was positive for alkaloids, flavonoids, and terpenoids, while peppermint oil contained flavonoids and saponins. The homogeneity test of the three formulations showed uniform results without clumps. The pH values obtained were F1 = 7.40, F2 = 7.27, and F3 = 7.12, which are within the safe range for topical use. The spread ability test showed F1 = 5.8 cm, F2 = 5.5 cm, and F3 = 5.6 cm, in accordance with the standard of 5–7 cm for topical preparations. The irritation test showed that none of the formulations caused reactions on the panelists. The hedonic test results indicated that Formula F3 was the most preferred, especially in terms of texture, Formula F2 was more preferred in color, while Formula F1 showed balanced results in aroma and texture. Thus, the lemongrass-peppermint balm stick is proven to be safe, effective, and practical, and has the potential to be developed as a modern therapeutic product based on local herbal resources.

Keywords: Balm Stick, Lemongrass Oil, Peppermint Oil, Herbal Innovation, Topical Formulation