PHYSICO-CHEMICAL ANALYSIS OF *KENDAPERALUMHARA THAILA*: A TRADITIONAL OIL

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Sneha kalpana has been taking a major role in *Bhaishajya Kalpana* literature in Ayurveda. Ghee and oil preparation are the two main dosage forms of it. *Kendaperalumhara thaila* is a therapeutically important traditional oil used in treating specially for muscle cramps. Being a traditional medicated oil, it needs standardization and quality control. The objective of this study is to prepare *Kendaperalumhara thaila* using *Murchitha.* Coconut oil as the base oil and to analyze quality control parameters of it. The *Kendaperalumhara thaila* was prepared according to the Ayurveda pharmacopeia. The prepared oil was subjected to organoleptic, physicochemical, qualitative phytochemical and chromatographical analyses. Organoleptic characters show greenish brown color, specific odor, little bit thick in consistency, viscous in touch and clear at room temperature. The developed chromatogram (Hexane: Ethyl acetate=1:1) was observed under 256 nm UV light and scanned using HPTLC scanner. It was found that the saponification value, acid value and peroxide value were 0.215985, 1.4025 and 0 respectively. All these values were within the standard limit. The oil was having refractive index of 1.4589, density of 0.8568 g/cm3, specific gravity of 0.8568, viscosity of 155.6 poise. Qualitative phytochemical analysis revealed that tannins, terpenoids and cardiac glycosides were positive and flavonoids, alkaloids, tannins and saponins were negative in *Kendaperalumhara thaila.* The HPTLC fingerprint profile of the oil showed five different peaks with the Rf values of -0.22, -0.05, 0.03, 0.19, 0.63. The study successfully formulated *Kendaperalumhara thaila* with standardized quality parameters, including suitable physicochemical properties and HPTLC fingerprint profiles. Phytochemical analysis confirmed the presence of beneficial compounds like tannins, terpenoids, and cardiac glycosides, validating the therapeutic potential of *Kendaperalumhara thaila*. These findings were found to be satisfactory for quality assurance. All the parameters can be utilized for the overall quality check over its preparation and formulation.

Keywords: Acid value, Saponification value, Peroxide value, HPTLC, phytochemical analysis