

Development and standardization of Ayurveda natural hair pack for hair growth and scalp health

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Ayurveda alternatives are becoming more popular as a result of growing health issues about the hair and scalp, brought on by chemical-based hair products. However, the reliability and broad acceptance of Ayurveda compositions are restricted by the absence of scientific standardization. This study aimed to develop and standardize an Ayurveda natural hair pack using ingredients known for their hair-strengthening properties, such as *Shikakai* pod (*Acacia concinna*), *Amla* fruit (*Embllica officinalis*), Fenugreek seed (*Trigonella foenum-graecum*), Hibiscus flower (*Hibiscus rosa-sinensis*), Bael fruit (*Aegle marmelos*), and Citrus peel. These ingredients were preprocessed, including cleaning, drying in the shade for 7-10 days to preserve the phytochemical properties and powdered. Next, they were mixed in a specific proportion as determined through trial formulations and traditional Ayurvedic references. Thin Layer Chromatography (TLC) fingerprinting, microbiological safety evaluation, heavy metal analysis, pH analysis and moisture content evaluation were used to optimize and test the formulation. The findings verified a pH of 3.5 that is suitable for the scalp, lack of artificial colouring and adherence to heavy metal and microbiological safety regulations. In terms of ingredient safety and purity, the Ayurveda hair pack fared better than commercial treatments. This study proves that Ayurveda hair formulations are consistent when they are standardized and scientifically tested. The study concluded that standardized Ayurveda formulation can provide effective and scientifically validated alternatives to synthetic hair care products in the market.

Keywords: *Herbal hair pack, Standardization, Thin Layer Chromatography, pH analysis, Scalp health*