Formulation and Standardization of Face Wash using Palmyrah Pulp and Aloe Vera Gel

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The facial skin is exposed to pollutants, microbes and old skin, necessitating the use of a face wash. Many, different face washes are available in the market, but most of them contain harmful synthetic chemicals which induce skin allergies as well as premature ageing of the skin. On the other hand, the Palmyrah fruit pulp has been reported to possess antioxidant properties and aloe vera gel has been being used for its moisturizing and soothing properties and both these plants are locally available. Hence this study was aimed at formulating a face wash containing Palmyrah pulp and Aloe vera gel. Six different types of face washes (F1, F2, F3, F4, F5, F6) were formulated by changing the ratio of Palmyrah pulp to Aloe vera while keeping the amount of the other ingredients constant. Here methylparaben and propylparaben were used as preservatives, sodium lauryl sulfate as a forming agent, propylene glycol as a humectant, and triethanolamine as a neutralizer, carbopol 940 as a gelling agent and water as a solvent. The total phenolic content of the different face washes was determined using UV spectroscopy and Gallic acid as the standard. The results showed the face washes containing pulp to aloe vera in 5:0 (F1) and 2:3 (F4) ratios contained the highest amount of total phenols. These two formulations were subjected to the physiochemical analysis. pH, viscosity, foamability, spreadability, thermal stability, washability, non-volatile matter, total surfactant, and density of the face washes were found to be within the limits expected for a facial cleanser. The anti-microbial activity of these two face washes was determined using Turbidometric method and the results demonstrate that these face washes possess the substantial anti-microbial activity and that F4 is more efficient than F1. Sensory evaluation to evaluate the appearance, colour, fragrance, texture, foamability, and washability of the face washes was conducted using thirty untrained panellists and 5-point Hedonic scale, and F4 was chosen as the best formulation based on the results. This study concludes that the formulated face wash (F4) has antioxidant and antimicrobial properties and is preferred in terms of texture, spreadability, foamability, washability, texture, colour and appearance.

Keywords: Aloe vera gel, Antioxidant, Anti-microbial activity, Palmyrah fruit pulp, Total phenolic content