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# An *In-Vitro* Evaluation of Photoprotective Potential of Leaf Extracts of *Atalantia Ceylanica*, *Hibiscus Furcatus* and Formulated Herbal Sunscreen Gel

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Higher exposure to solar radiation may cause skin diseases due to the harmful effects of sunburn. Sunscreen is one of best methods to prevent solar-induced skin cancers and sunburns. Sunscreens consist of natural constituents are less side effects than synthetic sunscreens. Therefore, this study aimed to evaluate the photoprotective activity of leaf extracts of *Atalantia ceylanica (Yakinaran)* and *Hibiscus furcatus (Napiriththa)* and formulate a sunscreen gel. Extracts were prepared by maceration with methanol. The absorbance of each leaf extract was measured using a UV-spectrophotometer. Sun protection factor (SPF) was calculated using the Mansur equation. A gel base was developed. A gel was developed incorporating freeze-dried leaf extracts into the gel base. SPF of formulated gel was determined. The stability of the gel formulation was tested over three months. As per the results, SPF of 1 mg/mL concentration of the herbal gel, reference product; Heliocare Ultra and leaf extracts of *A. ceylanica and H. furcatus* were 27.31, 30.79, 21.07 and 30.68, respectively. The stable gel formulation demonstrated a 27.31 SPF value and the reference product demonstrate 31.45 SPF value. A gel formulation with 1mg/mL extract was stable throughout 90 days at room temperature. It can be concluded that the gel formulation with 1mg/mL extract showed outstanding photoprotective activity, physicochemical properties and stability. These findings may create a new dimension for manufacturing sunscreens using herbal plants.

***Keywords:*** *Sun Protection Factor (SPF), sunscreens, gel, Atalantia ceylanica, Hibiscus furcatus*