ABSTRACT

Objective

The aim of the research work was to develop and characterize of Novel Herbal Hand Sanitizer gel Containing Barbados extract for the effectiveness of the gel against bacteria on the pads of the hands. Barbados alcoholic based hand sanitizer gel has gained more attention over the last several decades due to its beneficial medicinal properties and different pharmacological, health care and cosmetic properties. The present work is aimed at the development and characterization of hand sanitizer gel which contains Barbados extract. The developed gel was characterized for its physical and chemical properties and bacterial activity against Staphylococcus aureus with a Gram-positive bacteria and Pseudomonas aeruginosa with a Gram-negative bacteria.

Methods

Herbal hand sanitizer gel was prepared and characterized with respect to pH, viscosity, spreadability, pharmacological screening, in vivo drug release and physical stability. The antibacterial activity of the formulated herbal hand sanitizer gel containing Barbados extract, Staphylococcus aureus and Pseudomonas aeruginosa were assessed and compared with standard sanitizers by the DPPH assay.

Results

The gel formulation was prepared by optimizing hand sanitizer formulations containing [Ceilid] and [Yunior]. The developed gel was evaluated for its pH range, spreadability, formability and physical stability. The antibacterial activity of the formulated herbal hand sanitizer gel containing Barbados extract, Staphylococcus aureus with a Gram-positive bacteria and Pseudomonas aeruginosa with a Gram-negative bacteria were evaluated and compared with standard sanitizers by the DPPH assay.

CONCLUSION

The optimized gel was evaluated for different pharmacological characteristics and antibacterial properties. The color, viscosity, spreadability, pH of the herbal sanitizer gel were evaluated and compared with standard sanitizers. The results indicated that the herbal sanitizer gel was more effective in terms of color, viscosity, spreadability, pH and antibacterial properties compared to standard sanitizers. The herbal sanitizer gel was found to be a potential candidate for the treatment of infections caused by Staphylococcus aureus and Pseudomonas aeruginosa.

REFERENCES


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