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2nd International Research Conference & Exhibition on Siddha Medicine - 2020

2nd IRCESM - 2020

Healthy Life Through Siddha Medicine

PROCEEDINGS



Unit of Siddha Medicine, University of Jaffna. Kaithady, Jaffna, Sri Lanka. 05 - 08 March 2020

Developemnt of Antibacterial Herbal Gel Containing Leaves Extracts of *Acalypha indica* and *Eclipta alba*.

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This study was aimed to develop herbal antibacterial gel using leaves of methanolic extract of Acalypha indica and Eclipta alba. Extracts were prepared using soxhelet apparatus. Three different carbapol base gel formulations that contain 4% w/w of Eclipta alba extract, 4% w/w Acalypha indica extract and 4% w/w of Eclipta alba and Acalypha indica extracts (1:1) mixture were prepared and they were coded as formulations A, B and C respectively. Physical parameters of the prepared gel formulations were evaluated. The antibacterial activities of the prepared gel formulations were evaluated using agar disc diffusion method and activity was compared with a marketed antibacterial gel (Beta gel-G). Stability test was carried out by keeping the three formulations in well closed containers at room temperature and pH and spreadability were measured for 15 days. Multiple comparison of antibacterial activity (zone of inhibition) of the herbal gel was done using ANOVA and p value less than 0.05 was considered significant. Initial pH of Formulations A, B and C were 6.97 ± 0.1 , 6.63 ± 0.1 , and 6.74 ± 0.1 , respectively. Formulations A showed better spreadability compare to B and C. All the herbal gels showed higher mean zone of inhibition for Staphylococcus aureus than Pseudomonas aeruginosa. Formulation C has high anti bacterial activity and followed by A and B based on Turkey test results. However marketed product has highest activity than prepared formulations. According to stability test results, physically most stable formulation was A. This study gives promising results in the development of herbal based anti bacterial gels.

Key Words: Herbal antibacterial gel, Extract, Acalypha indica, Eclipta alba.