Journal of Industrial and Environmental Chemistry
ISSN 2591-7331(E)
2020
Vol.04 No.6

FORMULATION AND PRODUCTION OF ANTIMICROBIAL BATH GEL: THE INFLUENCE OF pH ON ANTIMICROBIAL POTENCY OF ALOE VERA EXTRACT OVER THAT OF THE NATURE OF INGREDIENTS THAT THE EXTRACT IS CONTAINED IN

David Ferdinand *
University Of Benin, Benin City.

Abstract

Statement of the Problem: The nature of ingredients aloe vera gel is contained in doesn't influence its antimicrobial efficacy like the pH of its surrounding.

Purpose of Study: To make a comparative analysis of the influence of pH and the nature of ingredients an aloe vera gel is contained in, in influencing its antimicrobial efficacy of an aloe vera gel.

Methodology: Two solutions(2% and 4%) of an acidic bath gel, having pH 5.5 and containing aloe vera gel, were subjected to antibacterial screening using agar well diffusion method. The dilutions of Staphylococcus Aureus and Escherichia Coli as the test organisms were added to bored cylindrical wells containing solidified agar. The solutions were then added to the well. The prepared plates were incubated at 37°C for 24 to 48hours. Antimicrobial activity was recorded in millimeters of the clear zones surrounding the wells. A study by Prakash et all in 2012 showed that the diameters of the clear zones of inhibition of Staphylococcus Aureus and Escherichia Coli using pure aloe vera extract in 30% ethanol-water solution were 24mm for both organisms.

Findings: The 4% solution, after 48hours, gave diameters of the clear zones of inhibition of Staphylococcus Aureus and Escherichia Coli to be 33mm and 25mm respectively, which are higher diameters than the ones recorded in pure aloe vera extract in 30% ethanol-water solution.

Conclusion And Significance: Within the limits of this study, it can be concluded that pH is a more important factor than nature of ingredients an aloe vera gel is contained in, in influencing the antimicrobial potency of an aloe vera gel.

Biography:

David Ferdinand Uche has a Bachelor of Science in Industrial Chemistry and is a Junior formulation and development chemist in the personal care and cosmetics and homecare in addition. He's currently with Skin101 Centre, Abuja, Nigeria, a giant in dermatological and aesthetic medical and surgical services. He has been a participant in CAS - a division of American Chemical Society - User Research Survey Study since June 2020 till date.

21st International Conference on Environmental Chemistry and Engineering; August 19-20, 2020 Webinar

Abstract Citation:

David Ferdinand, FORMULATION AND PRODUCTION OF ANTIMICROBIAL BATH GEL: THE INFLUENCE OF pH ON ANTIMICROBIAL POTENCY OF ALOE VERA EXTRACT OVER THAT OF THE NATURE OF INGREDIENTS THAT THE EXTRACT IS CONTAINED IN, Environmental chemistry 2020, 21st International Conference on Environmental Chemistry and Engineering; August 19-20, 2020 Webinar

https://environmentalchemistry.chemistryconferences.org/abstract/2020/formulation-and-production-of-antimicrobial-bath-gel-the-influence-of-ph-on-antimicrobial-potency-of-aloe-vera-extract-over-that-of-the-nature-of-ingredients-that-the-extract-is-contained-in