

PRODUCTION AND EVALUATION OF ANTIBACTERIAL SOAP
WITH GUYABANO (*Annona muricata*) EXTRACTS

Research Study

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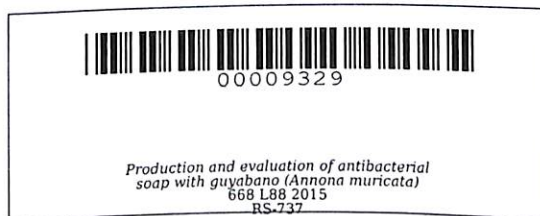
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GUYABANO (*Annona muricata*) EXTRACTS**

Research Study
Submitted to the Faculty of the
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ABSTRACT

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This study was conducted to produce and evaluate antibacterial soap with guyabano extracts. Specifically, it aimed to: 1.) identify the zones of inhibition exhibited by the guyabano extracts; 2.) identify the best part of guyabano tree that will exhibit inhibitory activities against *Staphylococcus aureus* and *Salmonella enterica* ser. Typhimurium; 3.) determine the sensory properties of the antibacterial soap with guyabano extracts in terms of odor, texture and general acceptability and 4.) determine the pH level of the antibacterial soap with guyabano extracts.

The study was conducted at the Microbiology Laboratory of the Department of Biological Sciences, Cavite State University from October to December 2014. The evaluation of the produced antibacterial soap with guyabano extracts was done on January 26, 2015. The evaluators were 30 students from the Department of Biological Sciences, Cavite State University.

The zones of inhibition exhibited by the guyabano leaves extracts against *Staphylococcus aureus* in three plates were as follows: 23 mm, 19 mm and 18 mm; and against *Salmonella enterica* ser. Typhimurium were 26 mm, 29 mm and 24 mm showing that the extracts were active against the organisms. The guyabano fruit and stem extracts had no zone of inhibition against *Salmonella enterica* ser. Typhimurium and *Staphylococcus aureus*.

The best part of guyabano tree that exhibited inhibitory activities against *Staphylococcus aureus* and *Salmonella enterica* ser. Typhimurium were the leaves and were therefore used to make the soap.

T₁ with 30 mL of guyabano leaves extract has the highest mean score in terms of texture described as smooth and in terms of general acceptability described as acceptable.

T₂ with 40 mL of guyabano leaves extract has the highest mean score in terms of odor described as slightly pleasant. The pH level of the antibacterial soap with guyabano leaves extract is 8.

The produced antibacterial soap with guyabano leaves extract has a slightly pleasant odor, smooth texture and was acceptable.

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INTRODUCTION

Soaps and other cleansing agents have been around for quite a long time. Nowadays, disinfection, decontamination, antiseptis/sanitization, and sterilization are some of the terms that describe the cleaning process by either using soaps/detergents or other agents. Numerous cleaning agents are available in the market, which are presented in various forms with distinct formulations. Triclosan, trichlorocarbamide and p-chloro-m-xyleneol (PCMX/chloroxylenol) are the commonly used antibacterial compound in medicated soaps.

Scrubbing the body or hands, particularly with soaps, is the first line of defense against bacteria and other pathogens that can cause colds, flu, skin infections and even