

**ABSTRACT**

**NAME OF INSTITUTION:** De La Salle University - Dasmariñas

**ADDRESS:** Dasmariñas, Cavite

**TITLE:** The Bacteriostatic Effect of *Carica papaya* on *Escherichia coli* and *Streptococcus pyogenes*.

**FUNDING SOURCE:** Parents

**COST:** P 5,000

**DATE STARTED:** October 1997

**DATE COMPLETED:** February 1998

**OBJECTIVES OF THE STUDY:**

**A. General**

To test if *Carica papaya* extracts have a bacteriostatic effect on *Escherichia coli* and *Streptococcus pyogenes*.

**B. Specific**

To know which concentration of the *Carica papaya* extracts, 100% pure extract, 75% and 50% crude extracts would have a bacteriostatic effect on *Escherichia coli* and *Streptococcus pyogenes*.

**SCOPE AND COVERAGE:**

Different concentrations, 100% pure extract, 75% and 50% crude extracts were used in the experiment to test whether they have a bacteriostatic effect on *Escherichia coli* and *Streptococcus pyogenes*. Culture media were used for the growth and cultivation of bacteria. The Filter-paper Disk Agar method was

conducted and the zones of inhibition were determined for the bacteriostatic effect on *Escherichia coli* and *Streptococcus pyogenes*.

#### **METHODOLOGY:**

##### **Research Design:**

In this study, experimental method was used.

##### **Research Setting:**

The experiment was conducted at the Department of Natural Sciences Laboratory at the De La Salle University-Dasmariñas, Dasmariñas, Cavite.

#### **RESEARCH PROCEDURE:**

Papayas were gathered and extracts were prepared (100% pure extract, 75% and 50% crude extracts). Thirty culture media were prepared for the cultivation and growth of *Escherichia coli* and *Streptococcus pyogenes*. Filter-paper Disk Agar method was used in the test proper. Zones of inhibition were measured by the vernier caliper and to determine its possible bacteriostatic effect in the bacteria.

#### **DATA GATHERING TOOL:**

The zones of inhibition were measured by the vernier caliper to determine if *Carica papaya* extracts have a bacteriostatic effect on *Escherichia coli* and *Streptococcus pyogenes*.

**MAJOR FINDINGS:**

The results based on experimentation can be summarized as follows:

1. The papaya extracts at different concentrations (100% pure; 75% and 50% crude) did not reach the ability of ampicillin in inhibiting the growth of *Escherichia coli*.
2. The papaya extracts at different concentrations (100% pure; 75% and 50% crude) did not reach the ability of penicillin in inhibiting the growth of *Streptococcus pyogenes*.

**CONCLUSION:**

The experimental data obtained from the study provided the following conclusions:

1. There was no bacteriostatic effect of *Carica papaya* extracts on *Escherichia coli* and *Streptococcus pyogenes*.
2. *Carica papaya* extracts at different concentrations (100% pure extract, 75% and 50% crude extracts) could not be used as an alternative for *Escherichia coli* and *Streptococcus pyogenes*.

**RECOMMENDATION:**

The study had limited its concept with the use of ripe papaya fruit as the sample and with only two bacteria, and was not able to determine the other factors to make the study more reliable.

The authors therefore recommend the use of an unripe papaya fruit or other parts of the papaya tree as the sample. They also recommend the use of other bacteria that can be found in the normal flora of the human body.

