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ANTIBIOTIC SENSITIVITY PROFILE OF Salmonella spp.
ISOLATES IN THE ILEOCECA OF CHICKEN
(Gallus gallus domesticus, Linn.) FROM
A DRESSING PLANT AT TRECE
MARTIRES CITY, CAVITE

THESIS

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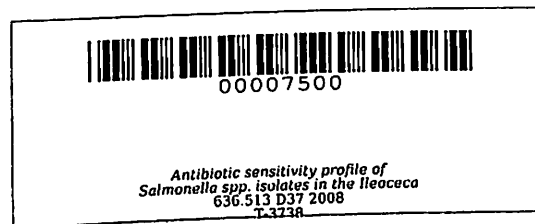
College of Veterinary Medicine and Biomedical Sciences
CAVITE STATE UNIVERSITY
Indang, Cavite

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**ANTIBIOTIC SENSITIVITY PROFILE OF *Salmonella* spp. ISOLATES
IN THE ILEOCECA OF CHICKEN (*Gallus gallus domesticus*, Linn)
FROM A DRESSING PLANT AT TRECE MARTIREZ CITY,
CAVITE**

**Undergraduate Thesis
Submitted to the Faculty of the
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**In partial fulfillment
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Doctor of Veterinary Medicine**



NELETH ARARACAP DELA CRUZ
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ABSTRACT

DELA CRUZ, NELETH A. Cavite State University, Indang, Cavite. April 2008. Antibiotic Sensitivity Profile of *Salmonella* spp Isolates in the Ileoceca of Chicken (*Gallus gallus domesticus*, Linn) from a Dressing Plant at Trece Martirez City, Cavite. Undergraduate Thesis. Doctor of Veterinary Medicine. Adviser: Ma. Cynthia R. dela Cruz, DVM, MS.

This study was done to determine the antibiotic sensitivity profile and prevalence of *Salmonella* spp. isolates from the ileoceca of chickens in a dressing plant in Trece Martirez City, Cavite.

All of the 100 ileoceca samples were subjected to cultivation in Xylose Lysine Desoxycholate agar or XLD (Difco®) plate. One hundred ninety-five presumptive *Salmonella* spp. were isolated as indicated by red colonies with or without black centers. These presumptive colonies were further characterized morphologically and biochemically. One hundred twenty-three isolates were gram-negative and appears red and rod-shaped organisms. Biochemically, the 4 isolates produced the following reactions: Oxidase-negative (-), Alkaline slant/Acid butt with gas production (K/A, gas) in Triple Sugar Iron (TSI) Agar, with hydrogen sulfide production, indole negative (-) and motile in Sulfide Indole Motility (SIM) Medium, Methyl red test positive (+), Voges Proskauer test negative (-), Citrate utilization test positive (+), Gelatin utilization test negative (-), Nitrate reduction test positive (+) and Urease test negative (-).

Sugar utilization tests revealed that 4 isolates fermented glucose and maltose while only 2 of the 4 isolates did not ferment lactose and sucrose. These 2 isolates were considered as the presumptive *Salmonella* spp and were further tested serologically using the polyvalent O and Vi antisera. The results of the study showed that the prevalence rate

of *Salmonella* spp. from a dressing plant at Trece Martirez City, Cavite was 2%. These findings indicate that some chickens processed in the dressing plant in Cavite harbored *Salmonella* spp. in their gut.

The two *Salmonella* spp. isolates have undergone antibiotic sensitivity testing using selected antibiotics and the results were as follows: Isolates 79C and 81C were resistant to lincomycin but susceptible to cephalotin, fosfomycin, gentamicin, norfloxacin, tetracycline, and nitrofurantoin. However, 79C isolate was resistant to ampicillin and trimethoprim- sulfamethoxazole in contrast to 81C which was susceptible. The results of antibiotic sensitivity testing with ampicillin and trimethoprim-sulfamethoxazole is inconclusive because of different reactions on the 2 isolates in the drugs used.

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INTRODUCTION

Salmonellosis is one of the most common and widely distributed food borne diseases. It constitutes a major public health burden and causes significant financial losses in many countries. Millions of human cases are reported worldwide every year and the disease results in thousands of deaths. Salmonellosis is caused by the bacteria *Salmonella* (Doyle, 1997).

Salmonellosis in humans is generally contracted through the consumption of contaminated food of animal origin (mainly meat, eggs and milk), although many other foods, including green vegetables contaminated by manure, have been implicated in its transmission. The causative organisms pass through the food chain from primary production to household or food-service establishments and institutions (Siliker, 1991).