

An Undergraduate Research Presented to The Faculty of the Biological Sciences Department College of Science and Computer Sciences De La Salle University-Dasmariñas Dasmariñas City

In Partial Fulfilment of the Requirements for the Degree of Bachelor of Science Major in Human Biology

## DESSA JEAN O. CASALME MARK GENE KYLO N. CENTENO March 2013





## ABSTRACT

This descriptive research determines the quality of deepwell water in Barangay Siranglupa and the sanitary practices among its residents. Five hundred (500) mL water samples from six (6) stations namely, near the quarry, residential, market, school and industrial sites were collected and analyzed using Multiple Tube Fermentation technique to determine the total coliform and E coli count (MPN/100ml). All samples are within the allowable limit for the *E.coli* (<1.1MPN/100ml). However, elevated risk of waterborne diseases manifested due to significant increased in total coliform count. The sites were ranked as follows Quarry 1=Market=School=Residential > Quarry 2> Industrial site. Majority of the people get their drinking water from deepwell and store them in tin containers. Segregation is not done in most of the household and drainage system is usually stagnant. Livestock were also prominent in the backyard of the residents. Such sanitary practices elevated the risks of contamination with pathogens.



De La Salle University – Dasmariñas

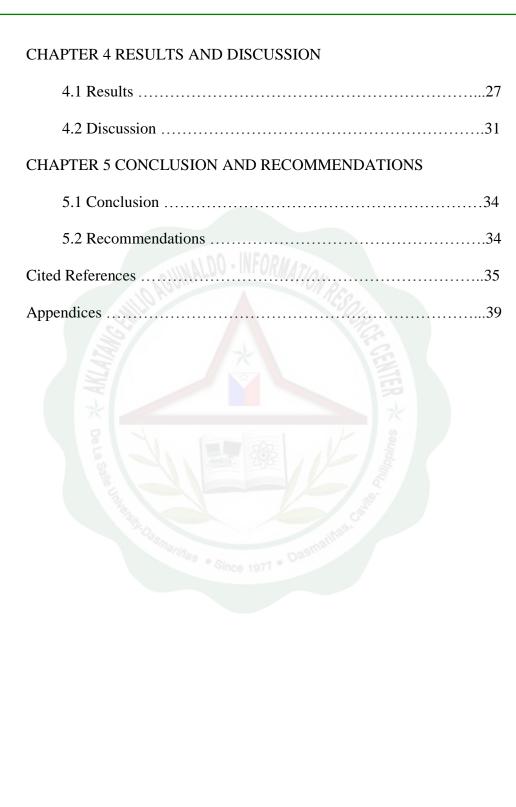


Title Page	1
Acknowledgements	2
Approval Sheet	3
Abstract	
Table of Contents	

## CHAPTER 1 INTRODUCTION

1.1 Background of the Study	9
1.2 Conceptual Framework	11
1.3 Statement of the Problem	
1.4 Scope and Limitation	
1.5 Significance of the Study	13
1.6 Definition of Terms	15
CHAPTER 2 REVIEW OF RELATED LITERATUR	Е
2.1 Conceptual Literature	
2.2 Related Studies	21
CHAPTER 3 METHODOLOGY	
3.1 Research Design	23
3.2 Procurement of Materials	23
3.3 Research Procedure	23







De La Salle University – Dasmariñas



A. Map of Sampling Site	40
B. MPN Determination from Multiple Tube Test	41
C. Photo Documentation	43
D. Survey Form	44
E. Raw Data	
F. Curriculum Vitae	50





De La Salle University – Dasmariñas



Table 1 MPN Index with 95% confidence limits   42
Table 2 Results of Survey
Table 3 Station 1 Results
Table 4 Station 2 Results
Table 4.1 Coliform and E.coli count tests on drinking samples     27
Table 4.2   Sanitary practices of residents in Brgy Siranglupa
Table 5 Station 3 Results
Table 5 Station 3 Results