

**MICROBIAL POTABILITY TESTING OF TAP WATER FROM DIFFERENT
COLLEGES IN CENTRAL LUZON STATE UNIVERSITY**

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An Undergraduate Thesis Submitted to the Faculty of the Department of Environmental
Science, College of Arts and Sciences, Central Luzon State University,
Science City of Muñoz, Nueva Ecija, Philippines
in Partial Fulfillment of the Requirements
for the Degree of

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE

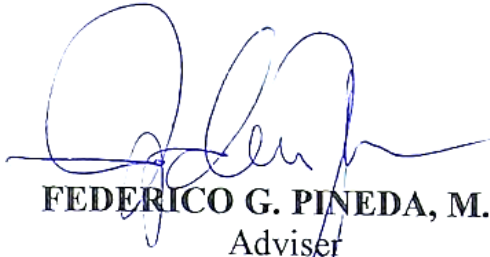
JUNE 2017

ENV-BIO-02-17-008

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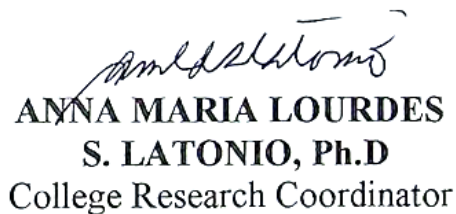
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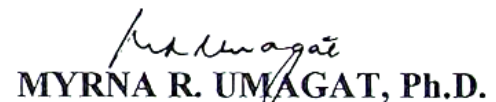


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ACKNOWLEDGMENT

First of all, I want to dedicate all of this to the Lord Jesus Christ, who gave me all of the abilities and resources in order for me to accomplish every single thing for this study. Also, I want to give my deepest appreciation to the people who helped me throughout the success of this paper. They are the following:

To my adviser, **Mr. Federico G. Pineda**, thank you sir for making this possible, thank you for all the time, effort, and patience you given to me;

To my critic, **Ms. Mary Jhane Valentino**, thank you ma'am for being part of my thesis, thank you for the moral support;

To our Department Research Coordinator, **Dr. Cesar V. Ortinero**, thank you sir for being our inspiration, despite of all our failures you are always there to guide us;

To our Department Chair, **Dr. Luzviminda Quitos**, thank you ma'am for your support and for always believing that we can do this;

To **Mrs. Tekila Grace Alvarez-Pineda**, I cannot do of all this without you tita, although you passed away so early, I would like to dedicate this success to you, your my inspiration since I got in college. Thank you for all the lessons I've learn to you, thank you for the help whenever and whatever I need you, you are always there for me, I miss you so much tita;

And my foremost inspiration, my ever supportive family, **Mommy, Daddy, Tita Lennie, Nanay, Tatay, Anne, Jelo, Jela**, thank you for always showing me your love, care and unending support. Thank you for helping me out and always making me feel that I can get through all of this successfully;

To my classmates who are also my good friends specially to my co-major , thank you for help, shared ideas, and most of all, thank you for being such a good company to be with while in college.

To my mentor, tita **Maiet Pineda**, thank you tita for helping me whenever I need you are always there, thank you for helping me do my thesis, for always reminding me that I can do this, To my best buddies **Renson Fulgencio**, who helped me in conducting my thesis, thank you for time, prayers and support you unconditionally gave me. I really appreciate it;

From the bottom of my heart, I want to thank you all! Without you, all this may not be possible. God bless you!

Aprillyn P. Reyes

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MICROBIAL POTABILITY TESTING OF TAP WATER FROM DIFFERENT COLLEGES IN CENTRAL LUZON STATE UNIVERSITY¹

APRILLYN P. REYES

ABSTRACT

Background: Tap water is the common source of water in Central Luzon State University and therefore should meet the potability requirements to be safe for drinking, cooking and laboratory use. Water supply is essential for the daily living and activities of the community inside the campus, thus clean sources of water must be maintained and analysis must be done regularly in the university. **Methods:** Two kinds of media were used in this test, namely Nutrient Agar (NA) and EMBA. The first medium permitted the growth of all the bacteria that were present in the sample, while the second one detected the presence of *E-coli*. Samples were diluted using the standard serial dilution procedure. **Results:** After conducting serial dilution for each water sample, the number of colonies was observed after the first 12 hours of incubation in NA. Average number of colonies was computed by taking the average count. The CAG and CHSI consistently gave the highest and the lowest number of bacterial growth respectively. All the water samples collected revealed positive growth of enteric bacteria by showing a metallic green sheen, indicating presence of *E. coli*. **Conclusions:** The tap water of different colleges is not potable.

Keywords: potability, tap water, eosin methylene blue agar, nutrient agar, *E-coli*, green metallic sheen, Eosin Methylene Blue Agar (EMBA).

¹ An undergraduate thesis presented to the Faculty of the Department of Environmental Science, College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija in partial fulfillment of the requirements for the degree of Bachelor of Science in Environmental Science. Prepared under the supervision of Associate Professor Mr. Federico G. Pineda and Associate Professor Ms Mary Jhane Valentino. June 2017. **ENV-BIO-02-17-008**

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