OPTIMUM NUTRITIONAL AND PHYSICAL CONDITIONS FOR EFFICIENT MYCELIAL GROWTH OF *Collybia reinakeana* RGR-FE-NSC 04 (ROSALES) STRAIN ON SOLID MEDIA FROM NATURAL SOURCES

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ACCEPTANCE SHEET

This undergraduate thesis entitled "**OPTIMUM NUTRITIONAL AND PHYSICAL CONDITIONS FOR EFFICIENT MYCELIAL GROWTH OF *Collybia reinakeana* RGR-FE-NSC 04 (ROSALES) STRAIN ON SOLID MEDIA FROM NATURAL SOURCES**" prepared and submitted by **JOHN PAULO G. PADUA**, in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN BIOLOGY (MICROBIOLOGY)**, is hereby accepted.

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BIOGRAPHICAL SKETCH

The author came from a simple, low profile family who originated from Dasmariñas, Cavite and permanently moved to Lupao, Nueva Ecija due to family's decision. He was born on December 12, 1996 and is the eldest among the three children of Mr. Benjamin Padua and Mrs. Rubella Padua.

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ABSTRACT

PADUA JOHN PAULO G., Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, **JUNE 2018, OPTIMUM NUTRITIONAL AND PHYSICAL CONDITIONS FOR EFFICIENT MYCELIAL GROWTH OF *Collybia reinakeana* RGR-FE-NSC 04 (Rosales) STRAIN ON SOLID MEDIA FROM NATURAL SOURCES**

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The optimum nutritional and physical conditions for the efficient mycelial growth of *Collybia reinakeana* RGR-FE-NSC 04 (Rosales) strain was determined. Eight different indigenous solid culture media were formulated and evaluated namely; coconut water, taro, rice bran, oatmeal, snap bean, mung bean and corn grit decoction. Agar (2.0%) was incorporated in every decoction in order to render the medium solid. The influence of the following physical factors such as pH, temperature, aeration and illumination was evaluated. Mycelial growth and mycelial density were recorded.

C. reinakeana RGR-FE-NSC 04 (Rosales) strain responded differently on varying culture media. Among the culture media, coconut water agar produced a uniform mycelial growth with very thick mycelial density. The optimum mycelial growth, as well as mycelial density of were noted in coconut water agar at pH 7.0 sealed with Parafilm and incubated at room temperature (28˚C) in an alternating light and dark condition.

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