

**A COMPARISON BETWEEN LOGISTIC SIGMOIDAL GROWTH  
MODEL AND GOMPERTZ GROWTH MODEL OVER  
POPULATION OF MICROALGAE *TETRASPORA SP***

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**Thesis Submitted in Fulfilment of the Requirement for  
Bachelor of Science (Hons.) Mathematical Modelling and Analytics  
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**February 2024**

## ABSTRACT

Microalgae are photosynthetic microorganisms that efficiently fix  $CO_2$ . They produce organic food molecules from carbon dioxide ( $CO_2$ ) and water, acquiring energy from sunlight. Microalgae, also known as seaweeds, are visible under a microscope and contribute significantly to atmospheric oxygen levels. Green algae, with their high capacity for carbon dioxide ( $CO_2$ ) generation, are being used as an alternative energy source to combat global warming. Mathematical models, such as descriptive growth curves and growth theory-based models, can help explain growth dynamics and predict future growth. The aim for this project is to estimate the population of microalgae *Tetraspora sp* for next few days. Algae are photosynthetic organisms found in various environments, including oceans, rivers, lakes, ponds, brackish water, and snow. The Logistic Sigmoidal growth model and the Gompertz growth model are used to explain the growth of populations of Microalgae *Tetraspora sp*. The Gompertz growth model shows the best model, which is chosen using error analysis.

## **ACKNOWLEDGMENT**

First and foremost, I want to thank Allah S.W.T. for all His blessings and direction in helping me overcome all of the obstacles in order to finish this project. In addition, I want to express my gratitude to Puan Roslina binti Ramli, my supervisor, for her suggestions and guidance on this project. Her sincere contribution of time and energy has been very beneficial to my accomplishment. I am also grateful to my family, colleagues and close friends who gave encouragement and feedback throughout my struggle to finish it. It is a big help in improving the quality of my work. I also want to express my sincere gratitude to everyone who has helped me with this research, both directly and indirectly.

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