

Pertumbuhan dan Produktivitas Biomassa Mikroalga Laut *Nannochloropsis* sp.UHO3 Menggunakan Pupuk Yang Berbeda

By

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Introduction

- The *Nannochloropsis* sp.UHO3 is a newly isolated diatom from a coastal area in Kendari
- Nutrients affect growth and biochemical composition of microalgae
- Aim : to determine the growth and biomass productivity of a marine microalga *Nannochloropsis* sp.UHO3 Under different culture media

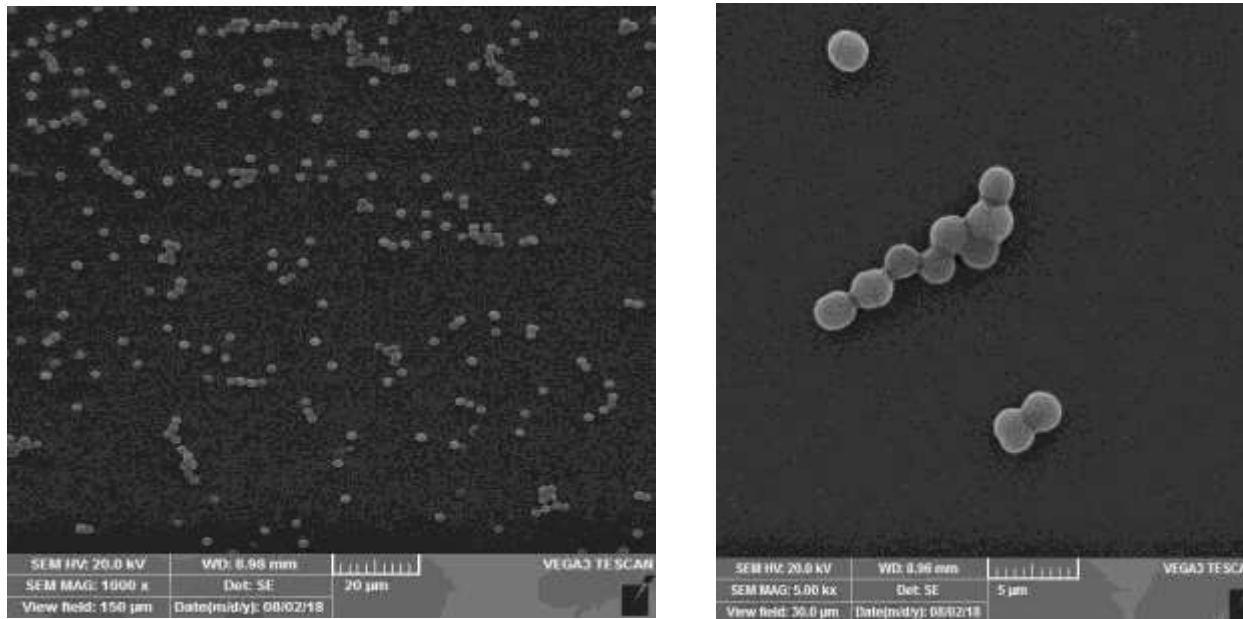


Figure 1. Scanning Electron Microscopy Images of the *Nannochloropsis* sp.IND-UHO3 at 1000x Magnification (left) and 10000x Magnification (right)

Materials and Methods

Culture conditions

- Different media (F/2, Walne, NPK, NPK+Urea, TSP+Urea)
- 3% salinity
- Ambient room temperature
- 12 h light and 12 h dark cycle
- Batch mode for 2 weeks

Analytical methods

- Cell counting using Neubar Haemocytometer
- SGR
- Biomass Yield
- Biomass Productivity

Statistical analysis

- One Way ANOVA
- Using Sigmaplot 14 Package (Systat-USA)

Results and Discussion

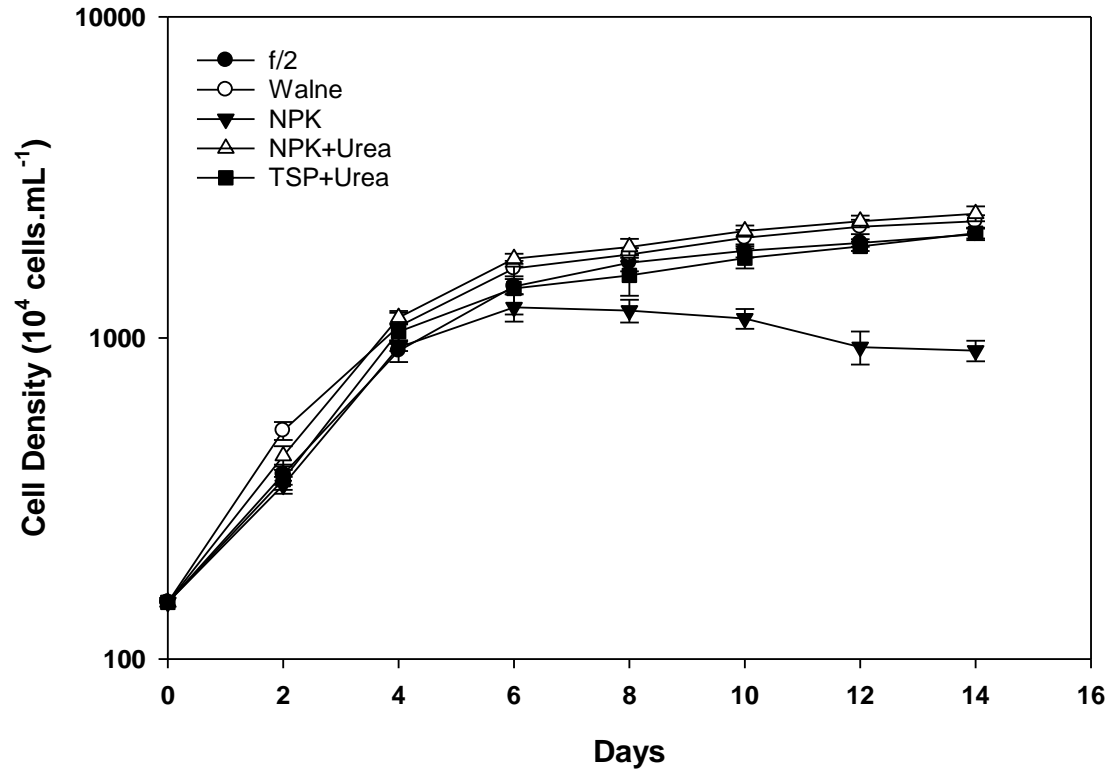


Figure 2. Growth curve of the *Nannochloropsis* sp.UHO3 under different culture medium

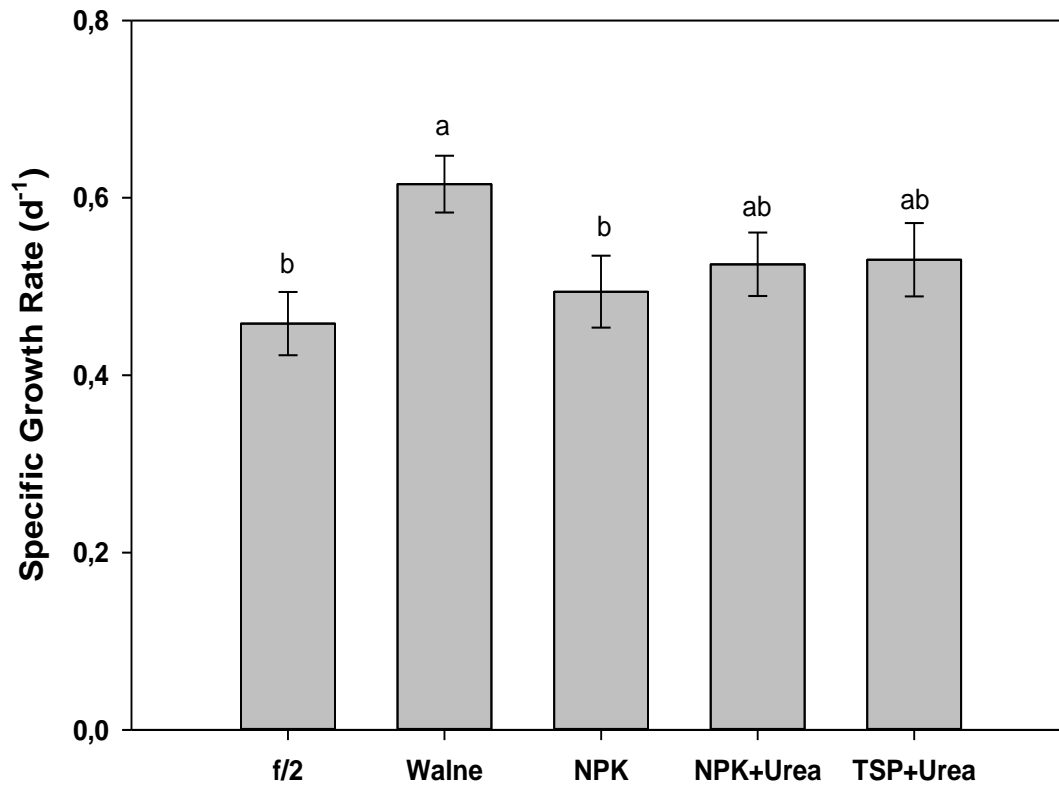


Figure 3. Specific Growth Rate of the *Nannochloropsis* sp.UHO3 under different culture medium

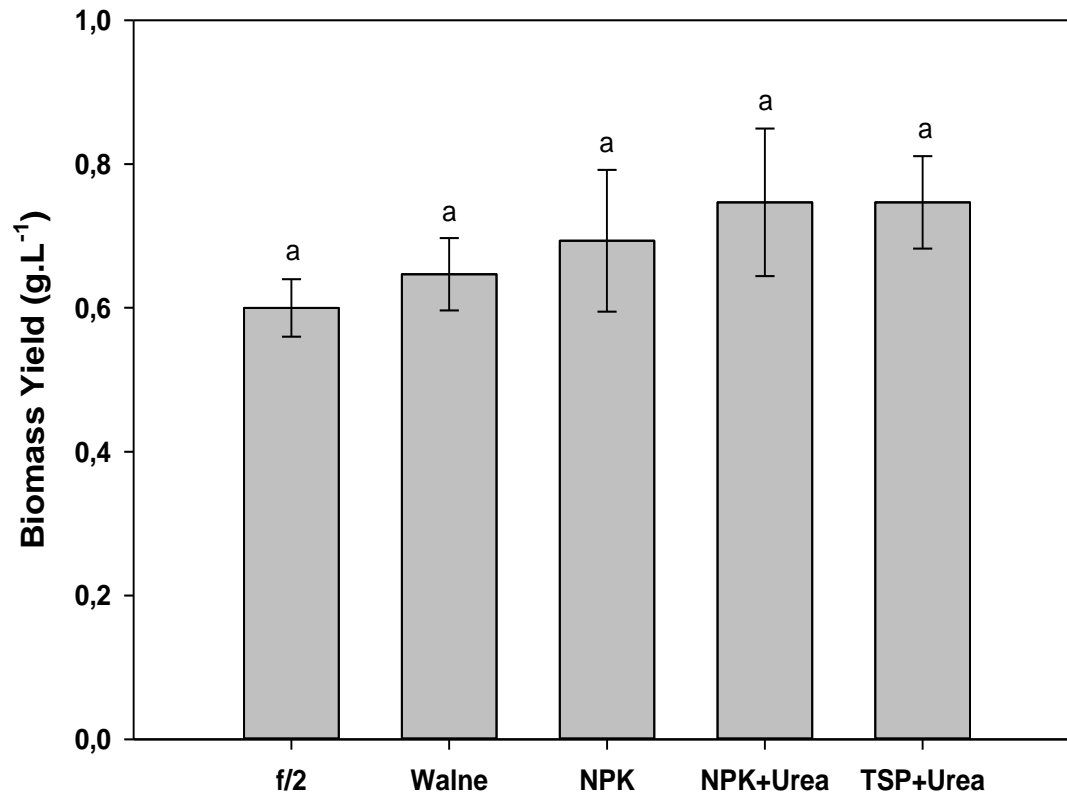


Figure 4. Biomass Yield of the *Nannochloropsis* sp.UHO3 under different culture medium

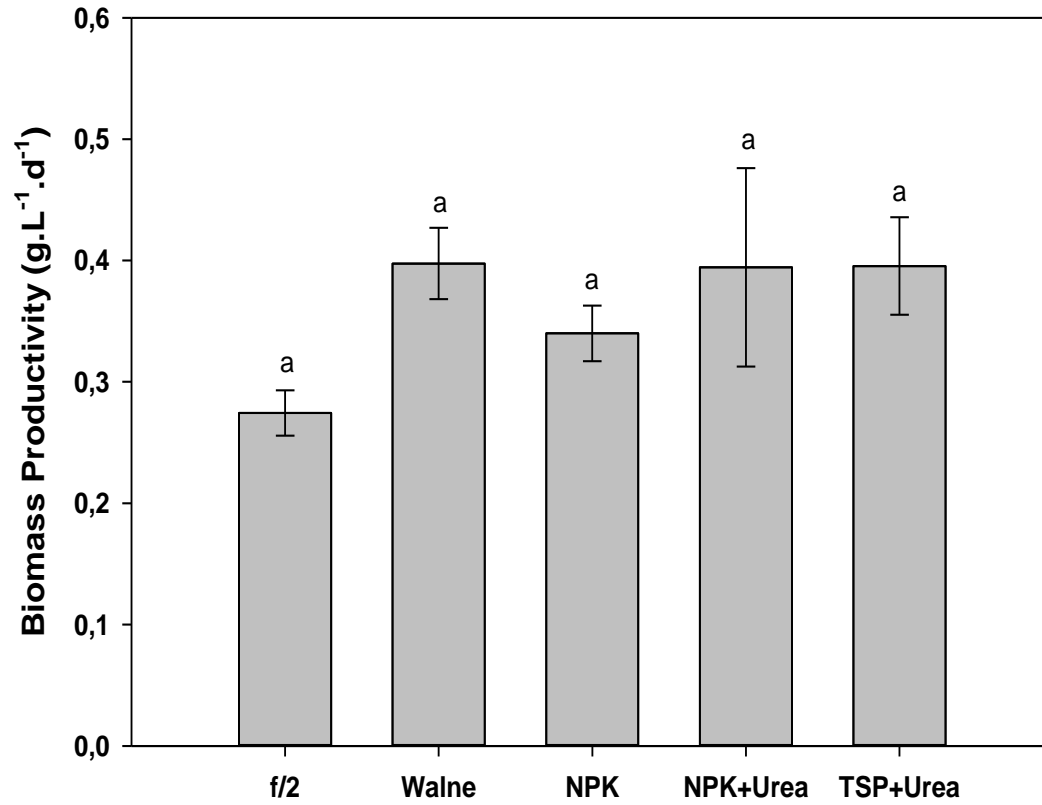
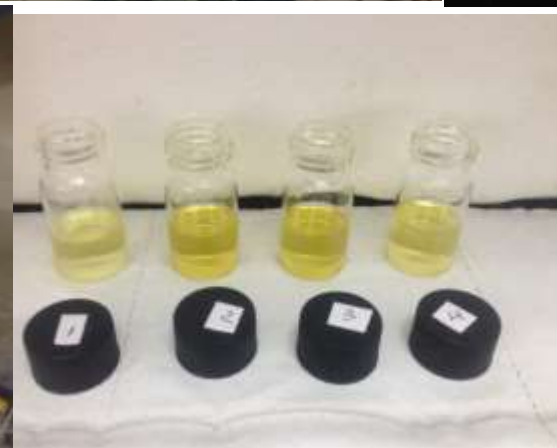


Figure 5. Biomass Productivity of the *Nannochloropsis* sp.UHO3 under different culture medium

Conclusion

- The highest growth rate achieved when the alga grown in Walne medium and the lowest in f/2 medium but the biomass productivities of the alga showed no significant difference between different media.
- For low cost mass production of the alga biomass, the use of NPK+Urea or TSP+Urea is preferable.



Thank You