

*Algal digested derived from wastewater treatment for nutrients supplement*

Abdulmutalib R. S. Zardawy\*

Dr. David Lewis\*\*

\* Masters in Water Resources Management, The University of Adelaide

\*\* The school of Chemical Engineering, The University of Adelaide

**Abstract**

The potential of disposing large amounts of nitrogen and phosphorus into water bodies makes it unsustainable and could lead to raise the problem of Eutrophication. For avoiding the potential for nutrient runoff and Eutrophication of surface waters, algal digestion effluents that are derived from wastewater treatment can be used as nutrient supplement to grow algae, which can further serve as feedstock for producing biogas and wastewater treatment. Nowadays, microalgae have been gaining significant attention worldwide as a valuable source of biomass due to its high growth rates and ability to capture atmospheric carbon dioxide. Algae require N, P and other nutrients for growth in addition to light and CO<sub>2</sub>. Likewise, algal wastes contain all the required nutrients and could be excellent low cost algae cultivation medium. Such properties of algal wastes have consequently led to some studies demonstrating the use of algal wastes as algae growth medium and Methane production. The present study was to investigate the effectiveness of using algal digested effluent as a nutrient supplement for cultivation of microalgae *MUR230*. Different treatments multiples of 0%, 2%, 4%, 5% and 10% were applied and algal growth was compared in regard to cell counts. The best growth in this study was obtained with microalgae grown with 4% algal digestion effluent medium. Recovery of nutrients from algal digested wastewaters by microalgae needs to be extensively investigated through further research.

Muhammad  
Department  
Abstract:  
in the growing  
specimens ha  
within two tra  
upper plain & t  
result of ident  
families and so  
published chec  
genus (*Orthod*  
etc.  
from gemmi  
evolutar (C-  
*Orthodontum*  
Stehener., Tin  
for the genus  
(Stampe) L. F  
stand for S.V  
The research i  
Key words: M  
ain & Foot



## UNIVERSITY of DUHOK

The 4<sup>th</sup> Kurdistan Conference on Biological Sciences

*This is to certify that*

*Abdulmutalib Zardawy*

*has participated in the 4<sup>th</sup> Kurdistan conference on  
Biological Sciences held at the University of Duhok,*

*Duhok on May 8-10<sup>th</sup>, 2012.*

Conference Coordinator

Prof. Dr. Jaladet M. S. Jubrael

