UNIVERSITI TEKNOLOGI MARA

EM MUDBALL

ALTERNATIVE METHOD FOR DOMESTIC WASTEWATER FROM MAWAR COLLEGE, UiTM SHAH ALAM

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B.Eng. (Hons) Chemical and Process

July 2017

ABSTRACT

The purpose of this study is to analyze the application of EM mudball towards domestic wastewater. Domestic wastewater is one of our main water sources for daily life. But, most domestic waste water are smelly, dirty, blackish in color and full with trash and are not well managed. This led to pollution that causes bad effect to our health and an increased in other living microorganism in the drain such as E-coli, Fecal Streptococcae and Salmonella. To overcome this issue, the absorption method by organic waste could be used which is EM mudball. Effective microorganism (EM) consist a multicultural of anaerobic and aerobic beneficial microorganisms is presently gaining popularity due to its environmentally friendly nature. Method that used to carry out this study is through the laboratory experimental for all consider parameters. The result obtained shows that EM mudball are capable to drastic reduce the COD, turbidity, SS, and color and also pH value start from third week. For COD it reduced to 168mg/L. While for turbidity, it reduced to 28.7 NTU. For suspended solid it reduced to 4.3mg/L, color reduced to 617.7unit PTCO and for pH the value decrease to 8.25 where closer to reach neutral level. But for DO, the values are keeping increasing till 6.3mg/L. Results show that EM mudball has potential to improve the effectiveness of treatment of domestic wastes.

ACKNOWLEDGEMENT

Thanks to Allah Almighty Who enabled me to research on such a hot issue of these days. This thesis owes its existence to the help, support and inspiration of several people. Firstly, I would like to express my sincere appreciation and gratitude for my thesis and research supervisor, Ass. Prof. Dr Mohd Amin bin Hashim and Madam Suhaiza Hanim Hanapiah for their guidance during my research. Their support and inspiring suggestion have been precious for the development of this thesis content.

I also would like to express my gratitude to my internship supervisor, Tn Hj Mohd Yusof Abd Wahab, Head of Department of Environmental, safety and health MPPG and also staff from Department of Environmental MPPG. They has given necessary advices and guidance and arranged all facilities to make my research easier. I choose this moment to acknowledge their contribution gratefully.

I would never forget all the chats and beautiful moment with my friends during completing this research. They were fundamental in supporting me during these stressful and difficult moments. Particularly, thank goes to all lecturers and laboratory assistant Faculty Chemical Engineering such as Dr. Safari and Mr. Mohibbah that always have been given me tremendous help during completion of my investigation

Last but not least, my deepest gratitude goes to my family for their unflagging love and unconditional support throughout my life and studies. They had made my live the most, unique, magic and carefree childhood that has made who I am now. I humbly extend my thanks to all concerned persons who co-operated with me in this regard.

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INTRODUCTION

1.1 Research Background

Wastewater can be defined as combination of domestic effluent consisting of black water such as excreta, urine and faecal sludge and grey water such as kitchen and bathing wastewater, water from commercial establishments and institutions including hospitals; industrial effluent, storm water and other urban run-off; agricultural, horticultural and aquaculture effluent, either dissolved or suspended matter (*Corcoran et al. 2010*). This entire source has its own characterization and components that been highlighted in terms of wastewater streams.

Nowadays, most of the country has upgraded the development process through the changes of the economy. From the changes, we are facing problems of a water quality crisis due to rapid development, continuous population growth, urbanization, land use change, industrialization, food production practices, increased living standards