

Vejeysri Vello^{1,2}
Phang Siew Moi^{1,2}
Chu Wan Loy³
Nazia Abdul Majid⁴

¹*Institute of Biological Sciences,
University of Malaya, 50603 Kuala
Lumpur, Malaysia*

²*Institute of Ocean and Earth
Sciences (IOES), University of
Malaya, 50603 Kuala Lumpur,
Malaysia*

³*International Medical University
(IMU), Bukit Jalil, 57000, Kuala
Lumpur*

⁴*Department of Genetics, Institute of
Biological Sciences, University of
Malaya, 50603, Kuala Lumpur*

H04. Evaluation of lipid productivity and biochemical composition of Malaysian green microalgae

The widely recognized need for the development of biomass-based production of high energy liquid transportation fuels can potentially be addressed by exploring microalgal oil (lipid). The microalgae with lipid-rich organelles present the most sustainable feedstock for biodiesel production. This study was aimed to evaluate the growth rate, lipid productivity and fatty acid composition of several green microalgae from University of Malaya Algae Culture Collection (UMACC). A total of 28 microalgal strains obtained from UMACC and two newly isolated *Chlorella* sp. strains from anaerobic treatment pond situated at the Labu Palm Oil Mill (POMTEC), Negeri Sembilan, were studied. The individual colonies were isolated and inoculated into Bold's Basal Medium (BBM) (Nichols, 1973) and Provasoli Medium (Phang & Chu, 1999). The growth was monitored for 12 days and the lipid productivity and fatty acid composition were compared between different growth phases.