Effects of $NaNO_3$ and KNO_3 in kosaric fertilizer on the growth of *Arthrospira platensis*

Norsalwani Muhamad Nor, Halisa Bajis, Hishamudin Omar and *Ahmad Ismail

Department of Biology, Faculty of Science, Universiti Putra Malaysia, 43400, Serdang, Selangor.

**Corresponding author.Tel.:+603 89466617; email address: aismail@upm.edu.my*

This study was carried out to determine whether the replacement of $NaNO_3$ to KNO_3 in Kosaric media can give better growth to *Arthrospira platensis*. The growth of *A. platensis* in different culture media was which are Kosaric media and Kosaric media with the modifications of $NaN0_3$ to KNO_3 at concentration of 0.75, 1.25, and 1.75g/L in indoor condition. The pH value for Kosaric media shows the highest reading which is 9.63, followed by both modified Kosaric media with the addition of 1.25g/L KNO_3 and 1.75g/L KNO_3 which have the same reading of 9.58, and 9.56 for modified Kosaric media with the addition of 0.75g/L KNO_3. Cell dry weight is 2.13mg/L for modified Kosaric media, I.78mg/L for modified Kosaric media with the addition of l .25g/L KNO_3, 1.61 mg/L. for modified Kosaric media with the addition of 0.75g/L KNO_3 and 1.18mg/L for Kosaric media. While for chlorophyll a content, Kosaric media shows the highest value which is 2.79mg/L, followed by modified Kosaric media with the addition of 1.75b/L KNO_3 (1.65mg/L), modified Kosaric media with the addition of 1.25g/L KNO_3 (1.29mg/L), and modified Kosaric media with the addition of 0.75g/L KNO_3 (1.09mg/L). Kosaric media is still the best culture media for culturing of *A. platensis*. Except for cell dry weight, the modified Kosaric media with the addition of 1.75g/L KNO_3 shows the highest reading. The alternative commercial fertilizer that are cheaper than Kosaric media are hoped to replace Kosaric media in culturing *A. platensis*.

Keywords: Kosaric medium, *Arthrospira platensis*, $NaNO_3$, KNO_3.