The optimization of Haematococcus pluvialis culture on outdoor photobioreactor of new polybag type

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A unicellular green microalgae, Haematococcus pluvialis, has been focused as a microbial source of astaxanthin production and astaxanthin has been suggested as a food supplement for humans. H. pluvialis accumulates the highest level of astaxanthin. In this study, the microalgal H. pluvialis was cultured at outdoor condition. The condition is matained, temperature is 20~25℃, light intensity is 80~150 umol photon/m²sA photobioreactor of poly bag type which has 15L volume was used for cell cultivation. H. pluvialis culture accumulated astaxanthin about 200 mg/L during the hundred days. This is good data compared with indoor condition at small scale. In industry, this result can be useful to make the high profitable photobioreactor.