

**CELLULAR DENSITY AND BIOCHEMICAL COMPOSITION OF
CHAETOCEROS MUELLERI LEMMERMAN (BACILLARIOPHYTA) IN
ALTERNATIVE CULTURE MEDIA**

Cavalcanti, N.L.¹; Moreira, E.G.⁴; Pereira, A.S.A.^{1,2}; Bertão, H.G.^{1,2}; Moura Júnior;
A.M.³; Koenig, M.L.⁴; Chaves, M.E.C.^{1,2}; Carvalho, V.C.O.².

¹Laboratório de Imunopatologia Keizo Asami-LIKA, ²Departamento de Bioquímica,
³Colégio de Aplicação, ⁴Departamento de Oceanografia.
UFPE – Pernambuco - Brazil

The aim of this work was to determine the *Chaetoceros muelleri* Lemmerman productivity in different culture media, to provide data in order to orientate aquafarmers, since the nutritional value of this microalgae, used as food for the cultivated animals. The microalgae was cultivated in three different media: F2 Guillard (F2), cattle dung extract (EEG) and earthworm dung extract (EEM), under constant light condition and temperature (22±1°C). The cellular density was 18.53 ± 0.43 x 10⁶ cell.mL⁻¹ in EEG; 21.61 ± 0.24 x 10⁶ cell.mL⁻¹ in F2 and of 23.06 ± 0.43 x 10⁶ cell.mL⁻¹ in EEM. The biochemical composition of the microalgae was determined through the assays of total carbohydrate: 1,278.29 ± 55.19 mg g⁻¹ to F2; 1,370.47 ± 38.23 mg g⁻¹ to EEG and 1,723.34 ± 6.04 mg g⁻¹ to EEM; total lipid: 7.63 ± 0.04 mg g⁻¹ to EEG; 7.88 ± 0.03 mg g⁻¹ to EEM and 8.61 ± 0.11 mg g⁻¹ to F2 and total protein: 5.87 ± 0.05 mg g⁻¹ to EEG; 8.54 ± 0.06 mg g⁻¹ to F2 and 11.07 ± 0.61 mg g⁻¹ to EEM. Amongst the analyzed parameters, *C. muelleri* was more productive in EEM medium.

Supported by: CAPES

Key words: Cellular density, culture, biochemical composition, *Chaetoceros muelleri*, alternative media