AP-11: Quantity measuring of phycobiliproteins from the algal biomass of spirulina platensis

HAKIM Djihane[1], BAALOUDJ Affef[2]

[1, 2] *Laboratoire Biologie, Eau et Environnement (LBEE), Faculté SNV-STU, Université 8 Mai 1945 Guelma. BP. 401 24000 Guelma, Algérie*

Email*: [1] ***djihane.hakim@hotmail.com***

Subject description: Spirulina platensis is a blue-green alga that contains about 70% of dry weight of proteins, 15-25% of carbohydrates and 11% of lipids, as well as vitamins and trace elements and especially phycobiliproteins which in this study we have focused on phycocyanin extraction.

Objectives: the objective of our study is to follow the evolution of spirulina cultivation and to optimize the production of phycocyanine to take advantage of its miraculous benefits.

Methods: We first started with the culture of spirulina and then we made the extraction by water of phycocyanin and the reading of absorbance was made by a spectrophotometer.

Results and discussion: The work carried out in the laboratory showed that for an algal growth and development a quantity of spirulina is required at seeding in order to maximize the chances of success of the cultures as well as a favorable environment; thus we found that the percentage of phycocyanine varied by changing the environment conditions such as: PH, temperature, intensity and light color.

Conclusion: Environmental stress and culture conditions influence phycocyanin production. The ideal conditions where we obtained a high percentage of phycocyanin are a temperature of 30°, Ph between 9-10 and white light.

Keywords: spirulina platensis, phycobiliproteins, optimization, phycocyanin