Alteration of the Metabolism of Chlorella in a Productive Way

Ibrahimova, Fidan (School: Lyceum Named after Academician Zarifa Aliyeva)

Alteration of the metabolism of chlorella in a productive direction. As you know, proteins,carbohydrates,lipids are one of the main factors of the existence of life on Earth. People use different methods,but they waste a lot of time,money and etc. But our method is more profitable. Chlorella is enriched with minerals, bioactive matters, proteins, lipids, carbohydrates. In our experiments we noticed that the metabolism of chlorella depends on the environment. By changing the factors of the habitat, we can alter the metabolism in a productive way. It is the most beneficial way to get starch and carbohydrates. First of all, we do not need enormous areas ,and we may avoid wasting time to grow the plants, in order to get starch in the future. Secondly, this algae is widespread and can adapt to any stress conditions. And the most effective conditions are: the concentration of CO2, light intensity, temperature, and food environment. Therefore, the presence of 1% CO2 concentration, attendance of nitrogen, phosphorus, sulfur and other macro elements change the metabolism to the protein metabolism and the algae accumulates various proteins, bioactive matters, vitamins and the ratio of proteins to dry mass is approximately 60-70%. The amount of carbohydrates in chlorella, cultivated in normal conditions, is approximately 18%, but if we increase the light intensity to 330 μmol/(m2s1), the amount of carbohydrates increase till 40%. Likewise, if we remove sulfur from the food environment, the percentage increases to 50%. We can use this method to get carbohydrate and starch in industry. We may also get other bioactive matters by changing the stress conditions.

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