

PROXIMATE ANALYSIS OF SPIRULINA PRODUCTS

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ABSTRACT

Spirulina products had a strong history in human consumption. The Mexican had started to take Spirulina as their daily use since 13th century. Since then many believed that Spirulina product will promote health benefit and provided good amount of protein. Therefore, the study on proximate analysis of Spirulina products was conducted. Five different brands manufactured from 3 different countries were selected for this study. The method of analysis for the nutritional composition included DNS reagent for carbohydrate determination, Lowry assay for protein assay, Soxhlet extraction for fat extraction, complete drying for moisture determination, and complete burning for ash determination. The proximate analysis results of Spirulina products were about 0.36 - 11.15% of carbohydrate content, protein content was 5.85% to 25.90%, fat content was 8.56% to 13.74%, moisture content 5.42% to 10.19%, and ash content was 8.96 - 30.73%. Meanwhile, the comparison of each Spirulina product in term of value was led by product B and C, while product A seems to be the most expensive product but only scored third. Another disappointed product was product E, its cost was second most expensive but only performed as fourth best. Finally, the cheaper product D was at the bottom most of the time as we expected. The product D and E was high in ash content. These were most probably due to the reason that the tableting formulation containing calcium. The protein and carbohydrate content were slightly below the expected result, due to the selection of methods of analysis. Obviously, product B and C would be the better choice for consumer due to the results obtained from the analysis.

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