

High-Protein Soy Cookies fortified with Spirulina

Abstract

Spirulina and soybean products are two very good sources of protein that can be produced and cultivated economically. A lot of research has been devoted to the improvement of soybean crops and spirulina cultivation such as the development of photobioreactors for algae production and genetic engineering. Both Spirulina and Soybeans are recognized as being 'complete protein sources'. In addition to the non-essential amino acids they both also contain all the essential amino acids that the body requires and cannot synthesize on its own. Furthermore they also provide many other important nutrients such as vitamins and minerals in the diet.

Thus in order to develop a healthy high protein food both soy and spirulina were used to enhance the nutritional value and protein content of cookies. Soy protein products including, soy flour, soy milk and soy nuts were used to replace other typical cookie ingredients. Spirulina was used at levels of 0.65%, 1.3% and 2.5%. determine its tolerance by consumers. Sensory evaluation showed no significant difference in acceptance of the three cookie formulations therefore the highest level of spirulina was chosen as preferable due to highest protein value. The product is hoped to be an innovative and cost effective way of helping to supplement the diets of protein deficient individuals, which are particularly prevalent in the Third world community.