THE EFFECT OF SUBSTITUTION SPIRULINA SP. ON BABY BISCUIT’S NUTRITION (BETACAROTENE AND PROTEIN)

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ABSTRACT

Baby biscuit is a solid food product that made from mixture of flour, margarine, sugar, milk, and fortified with vitamins and minerals. According to the Health Minister’s standard, baby biscuits must have protein content of 8 to 12g/100g biscuits and vitamin A content of 250 to 700μg/100g biscuits. Commercial baby biscuits contain only 5g of protein and no vitamin A detected in commercial baby biscuits. Spirulina sp. has a very high protein content which reaches 60% protein content and betacarotene which reaches 80% of the total carotenoid. Betacarotene have high antioxidant activity and beneficial in the immune system, the visual system, growth, and to meet the needs of vitamin A that still not meet the standard set by the Health Minister. In this research, Spirulina sp. was substituted into the baby biscuit, so the baby biscuit would be able to meet the needs of protein and vitamin A. The purpose of this research was to determine the effect of substitution of Spirulina sp. to increase protein and betacarotene contained in baby biscuit. The study was conducted with five treatments of wheat composite flour - Spirulina sp. (0%, 10%, 20%, 30%, and 40%) of the total flour composites used. Parameters evaluated in this study were the content of beta-carotene and protein. Protein and betacarotene content of baby biscuit with the substitution of 40% Spirulina sp. was 18.50g/100g and 5.321.28 IU. Based on these result, it can be concluded that substitution of Spirulina sp. increased protein and betacarotene content in baby biscuit.

Key words: Spirulina sp., protein, betacarotene, baby biscuit.