THE EFFECT OF CORN STRACH AND CINNAMON ADDITION ON PHYSICAL PROPERTIES, ANTIOXIDANT ACTIVITY AND PREFERENCE LEVEL OF WHITE CORN COOKIES

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ABSTRACT

Cookies was made from corn flour are less compact, so it needs to be added with corn starch. Cinnamon containing antioxidant compounds and good taste is added to get the cookies the panelists like. This study aims to determine the effect of adding corn starch and cinnamon to physical properties, antioxidant activity and the level of preference of white corn cookies. The research was carried out in two stages, that are making white corn flour and making cookies. Corn flour was made by white corn soaked in water for 4-5 hours, crushing, drying at 50^{o}C for 8 hours and sieving in 60 mesh. Making cookies was done by mixing ingredients, forming, baking using an oven. The experimental design used was a randomized block design with factorial patterns with two factors, that are the addition of corn starch (0, 25 and 50%) and cinnamon (0, 4 and 8%). The data obtained was calculated statistically by univariate analysis, if there are real difference then continued DMRT. White corn cookies was analyzed its texture, volume expansion, colour, antioxidants activity. The selected cookies was analyzed the water, ash and protein content. The results show that cookies with the more addition of corn starch the harder texture it would be. The higher yellow value it would be, blue and antioxidant activity are increasing. Cookies with the more addition of cinnamon, the higher red and blue value it would be, and antioxidant activity is increasing. The concentration of the addition of 50% corn starch and 4% cinnamon was cookies which is prefered by panelists with a texture value of 8.12 kg, a development volume of 131.94, a red value of 4.50, yellow 4.25, blue 2.00 and antioxidant activity 74,74%. The characteristics of cookies are the water content of 5.75% bb, ash of 1.83% bb and protein of 3.10% bb.

Keywords: white corn flour, cookies, corn starch, cinnamon, antioxidant activity.