

## ABSTRACT

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### **UTILIZATION OF BEETROOT (*Beta vulgaris*) AND HOLY BASIL (*Ocimum tenuiflorum*) AS COMPOSITE FLOUR IN THE MAKING OF COOKIES WITH DIFFERENT TYPE OF FAT**

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Cookies is a common snack to be consume and nowadays there are many varieties of cookies available. Utilization of beetroot in cookies is common, while utilization of holy basil in cookies is uncommon, and the research regarding utilization of holy basil in cookies is minimal. Incorporating beetroot and holy basil flour as composite flour to substitute the wheat flour can increase mineral content in cookies. The objective of this research is to determine the best ratio of beetroot and holy basil flour as wheat flour substitute (100:0, 90:10, 80:20, 70:30, 60:40) and the type of fat (butter; margarine) toward the mineral, fat, hardness, spread ratio, and organoleptic properties of cookies. The best formulation cookies were the ratio 80:20 with butter. It had Ca ( $160.01 \pm 3.17$  mg/100g), Fe ( $5.85 \pm 0.24$  mg/100g), and Mg ( $46.62 \pm 0.04$  mg/100g). fat content  $23.43 \pm 0.46\%$ , hardness  $2047.06 \pm 0.35$ g, spread ratio value of  $6.17 \pm 0.41$ . Based on scoring test, it was slightly sweet ( $3.75 \pm 1.33$ ), slightly hard texture ( $3.75 \pm 1.11$ ), slightly had minty aroma ( $3.85 \pm 0.99$ ), slightly not have off flavor ( $3.45 \pm 1.50$ ), and slightly had after taste ( $3.75 \pm 1.61$ ). The taste ( $4.95 \pm 1.28$ ), texture ( $4.65 \pm 1.35$ ), and aroma ( $4.55 \pm 1.23$ ) slightly like by the panelist. The panelist had neutral acceptance toward off flavor ( $4.25 \pm 1.55$ ) and after taste ( $4.30 \pm 1.59$ ), but slightly like the overall acceptance of cookies ( $4.85 \pm 1.35$ ). Moreover, the ratio 80:20 butter had higher protein ( $6.62 \pm 0.001$ ) and ash ( $2.54 \pm 0.07$ ), however lower moisture ( $3.02 \pm 0.26$ ) compares to control (100:0, butter).

Keywords : Beetroot, cookies, holy basil, mineral

References : 90 (2000-2021)