

**DEVELOPMENT OF A BISCUIT ENRICHED WITH TEA
POLYPHENOLS**

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ABSTRACT

Tea (*Camelia sinensis*) is the most popular beverage containing relatively large amounts of polyphenols; it could be tremendously important source of polyphenol constituents in human diet. This study was carried out to investigate better extraction of tea polyphenols and develop polyphenol-rich biscuits. Extraction efficiencies of water and ethanol were tested in different time and temperature combinations. High polyphenol content was obtained from water at 80 °C for 30 min extraction and 40 % ethanol solution at 40 °C for 2 hours extraction. As a polyphenol source 40 g BOPF black tea concentrated extracts were used for final product development. Organoleptic properties of the biscuits were evaluated using sensory analysis. Higher acceptance for overall acceptability ($p < 0.05$) was observed for ethanol extract incorporated biscuit. Total polyphenol content in consumer accepted biscuit ranged between 551.25 – 521.07 mg / 10g (one biscuit), that mean one biscuit is equal to two cup of tea. If one person consume one cup of tea with developed biscuits that will give equal benefits (Tea Polyphenol) of consuming three cups of tea. Present study indicated that ethanol extracts were accepted by consumers as a polyphenol-rich source in food product constituents, and might be an interest of wider usage as food components.

Key Words: Biscuit, Extraction, Functional food, Polyphenols, Self Life, Sensory