

## **Comparative studies of physicochemical properties of sweet potato (*Ipomoea batatas*) cookies from different variations of sweet potato**

### **ABSTRACT**

Sweet potato possesses superb nutritional values and it grows easily in a hot and humid climate. In Malaysia, sweet potatoes are commonly used in making traditional snacks and sweet desserts despite that sweet potato has greater potential for utilization in other new food products. This study was conducted to formulate cookies with partial substitution of wheat flour with orange-flesh (VitAto) or purple-fleshed (Anggun) sweet potatoes. The cookies were prepared from the formulation blend of sweet potato and wheat flour in the substitution levels of 20% and 40%, respectively. The proximate composition and physicochemical properties of the formulated cookies were studied. The proximate analysis results depicted that, compared to the control cookies, sweet potato incorporated cookies had higher moisture, ash, and carbohydrates contents but lower crude protein and crude fat. The cookies incorporated with sweet potato presented a significantly greater spread ratio and diameter than the control. The results of texture profile analysis indicated that partial substitution of sweet potato for wheat flour significantly decreased the hardness of cookies though it had zero effect on the attribute of springiness. These findings revealed that the sweet potato has positive potential uses in the development of cookies or other bakery products with enhanced nutritional quality.