

## Potential Application of Artocarpus odoratisimmus Seed Flour in Bread Production

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**Abstract :** The search for lesser known and underutilized crops, many of which are potentially valuable as human and animal foods has been the focus of research in recent years. Tarap (*Artocarpus odoratisimmus*) is one of the most delicious tropical fruit and can be found extensively in Borneo, particularly in Sabah and Sarawak. This study was conducted in order to determine the proximate composition, mineral contents as well as to study the effect of the seed flour on the quality of bread produced. Tarap seed powder (TSP) was incorporated (up to 20%) with wheat flour and used to produce bread. The moisture content, ash, protein, fat, ash, carbohydrates, and dietary fiber were measured using AOAC methods while the mineral content was determined using AAS. The effect of substitution of wheat flour with Tarap seed flour on the quality of dough and bread was investigated using various techniques. Farinograph tests were applied to determine the effect of seaweed powder on the rheological properties of wheat flour dough, while texture profile analysis (TPA) was used to measure the textural properties of the final product. Besides that sensory evaluations were also conducted. On a dry weight basis, the TSP was composed of 12.50% moisture, 8.78% protein, 15.60% fat, 1.17% ash, 49.65% carbohydrate and 12.30% of crude fiber. The highest mineral found were Mg, followed by K, Ca, Fe and Na respectively. Farinograph results found that as TSP percentage increased, dough consistency, water absorption capacity and development time of dough decreased. Sensory analysis results showed that bread with 10% of TSP was the most accepted by panelists where the highest acceptability score were found for aroma, taste, colour, crumb texture as well as overall acceptance. The breads with more than 10% of TSP obtained lower acceptability score in most of attributes tested.

**Keywords :** tarap seed, proximate analysis, bread, sensory evaluation

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