

ABSTRACT

Colocasia esculenta (L.) Schott var. *esculenta* is one of the most common and easily available tropical as well as subtropical crop. Taro is a fairly good source of protein, but rich in carbohydrate, vitamins and the essential amino acids such as lysine, leucine, isoleucine. Colocasia is one of the most unutilized and cost effective crop. Colocasia flours generally have a low water activity level and as such keep much longer. So, it is used for the substitution purpose in the bread. As, bread is one of the food types that is eaten by both rich and poor people.

Composite flour can be referred to as the mixture of non-wheat flours (such as flour from roots and tubers, legumes or cereals) that is created to satisfy specific functional characteristics and nutrient composition. The slices of the colocasia tubers were dried in the tray drier at 50°C for 8 h and then the dried slices are grinded in the grinder for around 3 min. The flour that is obtained is used for the different comparative analysis with the refined wheat flour as well as used at different substitution level at 5%, 10% and 15% in the preparation of bread. Statistical analysis was done by using Fisher's Least significance Difference. It was found that the starch content of colocasia flour has 70% and the refined wheat flour has 32.4%. Similarly, the protein content is higher i.e. 13.3% in refined wheat flour than the colocasia flour i.e. 6.92% as the wheat flour is mainly consists of gluten. Different substituted bread along with the control is used for the analysis like moisture content, fat, ash, protein, starch etc. and found that the ash content, crude fiber content increases as the colocasia flour incorporation increases. Starch content of the bread increases from 51.4-66.5% as the concentration of the colocasia flour increases. Colour, of the bread is also estimated and found that with the increase in the concentration of the colocasia flour, L value decreases from 34.97 to 22.64. Texture became harder as the concentration of colocasia flour increases from 5% to 15%. There is no significance difference is seen in case of springiness of the 5% concentration of colocasia flour bread but as the concentration of the colocasia flour increases, springiness also increases. Finally, sensory analysis was done and found that the incorporation of colocasia flour in the preparation of the bread upto 10% concentration was acceptable.

Keywords: *Colocasia esculenta* (L.) Schott var. *esculenta*, Colocasia flour, Refined wheat flour, composite bread.