Title : **Evaluation of chemical composition, sensory and microbial quality of wheat-soy okara bread.**

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Introduction:

Soy okara is a by-product generated during tofu or soymilk production processes. The huge quantities of soy okara produced annually pose a significant disposal problem. The study was based on the concept that the wheat flour can be substituted with soy okara to enhance agro waste utilization and increase the nutritional value of conventional whole wheat bread. Presently, okara is used as animal feed but most is dumped and burned as waste. However, no industrial product made of soy okara is currently available commercially (1, 2).

Methodology :

Whole wheat bread recipe was standardized and then freshly prepared soy okara was incorporated in the recipe at 15%, 20% and 25% level in the breads. Sensory evaluation was carried out using trained and semi-trained sensory panel members. Macro and micro nutrient estimation was carried out using biochemical methods.

Results:

Incorporation of soy okara at 20% level in standardized whole wheat bread recipe was accepted in terms of sensory properties as compared to control whole wheat bread. The calorific value of wheat-soy okara bread (WSOB-20%) was 244 Kcal/100g and moisture content was 42 g%, crude fat was 15.6 g%, crude fiber was 15.5 g%, crude protein was 11.55 g % and total ash was 0.8%. The micronutrient content was 88 mg calcium, 0.27 mg iron and 51 mg of phosphorous per 100 g sample. The product developed with incorporation of wet basis soy okara showed an increase in taste and fiber content as compared to the control. The wheat-soy okara bread (20%) had more protein, 10 times more fibre, 5 times more fat (invisible fat) and double the amount of calcium and iron as compared to the whole wheat bread (control).

Conclusion:

Soyabean as well as soy okara has very high protein content and is rich in fiber, calcium and magnesium. The soya okara substitution in bakery industry would be beneficial in increasing the nutritive value of conventional whole wheat bread as well as in utilizing the agro waste purposefully.

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