PRELIMINARY STUDY ON THE DEVELOPMENT OF A SOYBEAN INCORPORATED BREAK FAST CEREALS ADOPTING DRUM DRYING TECHNOLOGY.

BY

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ABSTRACT

Satisfactory diets must contain protein that is sufficient not only in quantity, but also in quality. The soybean *Glycine max* belonging to the family legumenosae has the highest protein content among the vegetable protein foods, and rice is the staple food in several countries in the Eastern region.

Experiments were conducted to introduce a new type of soybean incorporated breakfast cereal product by adopting drum drying technology. Here the ratio between the " Bean-Rice" was maintained 30-40% to 70-60% respectively. In addition, to overcome the beany flavor and increase the taste, banana, pumpkin and milk powder were added additionally in each type of combination. Products were prepared as drum dried products and their organoleptic properties were also evaluated.

In sensory evaluation studies, according to the panelists results, the product which contained Rice, Soybean and Banana was selected as best based on the taste ranking.

Moisture sorption studies were conducted for the selected product to find out the optimal level of moisture in the product for long term storage. For this study, Sorption Isotherm determination Unit were prepared by using the empty bottles, plastic tips, test tubes, petric dishes and vaseline. The objective of the moisture sorption study is to determine Brunner- Emmet-Teller (B.E.T) monolayer value. By finding out the values, the optimal level of moisture in the product for long term storage was estimated. This study was conducted at different temperatures, 5^0C, 30^0C, 40^0C and 45^0C. Refrigerator was used to maintain 5^0C as constant, 30^0C was maintained as room temperature and 40^0C and 45^0C were maintained in decicator.

The monolayer values for the product at 5^0C, 30^0C, 40^0C and 45^0C were 2.48, 5.23, 5.12 and 5.8 gram per 100g dry product, respectively.

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