

Development of Maize-Soy based supplementary food and evaluation of quality parameters

Throughout history, hunger and malnutrition caused by lack of nutrients or by poor health, particularly infectious diseases, which prevent the body from absorbing and utilizing food efficiently.

Studies were conducted to develop low cost nutritious Maize-Soy based supplementary food which also can be using as breakfast food using less capital intensive method. In addition, green gram and chickpea were added to increase the organoleptic properties and to enhance the consumer acceptability.

Proximate analysis indicated that the blend containing flours of maize, soybean, green gram and chickpea has high protein content (24.5%) and low fat content (9.7%) which is suitable for human consumption. Sensory evaluation revealed that there was no significant difference among the formulated blends. However, comparatively higher percentage of the panelists selected the blend which consist flours of maize, soybean, green gram and chickpea as the best.

Moisture sorption studies were conducted to determine the ideal safe level of moisture content for long storage. Sorption isotherm determination unit was prepared to determine the Brunner Emmet Teller (B.E.T.) monolayer value. Using the B.E.T. monolayer values, the optimal level of moisture in the product for long term storage at different temperatures of 30 °C and 40 °C were determined. The monolayer values for

the blend at 30 °C and 40 °C were determined 3.19 and 3.05 g moisture / 100G dry weight, respectively.