Development of a Ready to Eat Breakfast Cereal with Incorporating Ovalburnin from Chicken Egg White

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Ovalbumin incorporated breakfast cereal is a good source of protein with several functional properties. Shrinking the daily protein intake through breakfast associate with daily cognitive functions and obesity in long term. Formulation of breakfast cereal carried out several preliminary trials with different percentages of rice flour, chickpea, mung, cowpea, maize, skim milk powder and ovalbumin. Breakfast cereal was achieved by mixing 20 % rice, 6.67 % maize, mung pea, cowpea and sugar, 12 % chickpea, 3.34 % skim milk powder and ovalbumin, 0.67 % salt and vanilla with 33.3 % water. Protein content of the formula was reported as 15.12+0.53 % and protein calories reported high value of 17.34 % from total energy. Moisture and ash contents were noted to be high and low in fat (4.32+0.65%) content. High value of Bulk Density of 0.67+0.03 g/ml reported with desirable packing abilities. Lower water absorption capacity (WAC) 144.58+0.16 g/100g, of the product is desirable for nutrient uptake. High lightness and yellowness with low redness was reported (0-3.96+0.36, b*-35.20±0.56 and L*-69.20+1.12), which results a desirable appearance. Microbiological count (Total Plate Count) was not exceeded the recommended level of ready to eat products up to forth week under room temperature storage condition. There was no *Salmonella* or coliform reported with same storage conditions. pH of the product did not vary with the period measured ($p>0.05$). Based on those facts this ovalbumin incorporated breakfast cereal can recommended as a good protein diet with low fat for adults and adolescent.

Keywords: Breakfast cereal, Ovalbumin