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KEY WORD : BLENDERIZED DIET / AMYLASE RICH FOOD

SONGSRI KEAWTANOM: DEVELOPMENT OF LOW VISCOSITY BLENDERIZED DIETS BY ADDING AMYLASE RICH FOOD FOR PATIENT WITH INTACT GASTROINTESTINAL FUNCTION. THESIS ADVISOR: CHITTIMA SINGHAVANICH, M.sc,Dip., CHOMCHARK CHUNTRASAKUL, M.D., F.A..C.S, SRISAMAI VIBOONYANON, M.sc, 186 P. ISBN 974-589-120-7.

An enteral tube feeding survey carried out in four hospitals, indicated that problems of using blenderized diet were spoilage, unacceptable flavor, high viscosity, and diarrhea. Therefore, amylase rich food and the process of pasteurization were used for development of the blenderized diet for patient with intact gastrointestinal function.

The four blenderized diet formulas were produced through lab scale level. Their compositions including carbohydrate from rice flour and sucrose, protein from soy protein isolate and egg, fat from soybean oil, vitamins and minerals from carrot, pumpkin, and ivy gourd. In addition, the vitamin and mineral premix were added in all formulas in order to fulfill the requirement. Color and flavor were added in blenderized diets for oral supplements. Energy distribution of blenderized diet formulas were 47.75–51.57%, 17.10-18.91%, 31.33-33.34% for carbohydrate, protein, and fat, respectively. The caloric density of blenderized diet formulas was 0.91-1.02 kcal/ml. Most of the vitamins and minerals met the requirement.

Amylase rich food (ARF) was made from Suphanburi 90 paddy rice. The viscosity of four blenderized diet formulas was reduced 98.82-99.08 percent by adding ARF at 10% of rice flour. Viscosity of blenderized diets was between 11.24-19.87 cps. The other physical properties were flow rate, pH, and osmolarity, at a rate on 16.43-37.20 ml/min, 7.67-7.96, and 358.00-407.33 mOsm/kg.H₂O, respectively. Sensory evaluation of all formulas were evaluated by 9-point hedonic scale with score indicating like slightly to like moderately (6.30-6.73). These score were not significantly different from the commercial oral supplement formula.

The mesophilic bacterial count was between $1.1-1.9 \times 10^2$ cfu/ml. Psychophilic bacteria count, *coliform*, *salmonella spp* and *Clostridium perfringen* were not found in all formulas. All formulas were kept in cold room (4-6°C) for 3 days and the physical properties and the microbiological were not changed.