SWEETENED FLAVORED MILK BASED INSTANT POWDER

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Milk based powdered products are important for features such as convenience, indulgence, good stability and providing nutritional refreshment. This study was carried out to develop a sweetened flavored milk based instant product (blend B) which can be reconstituted by addition of cold water to consume as a fresh beverage. Milk base was selected by admixing, instant full cream milk powder and whey powder. Sugar, vanilla powder, stabilizer were added to improve sweetness and flavor. Suitable levels of ingredients of blend B were determined by trial and error. Products were evaluated for sensory attributes such as aroma, sweetness, creaminess, taste, mouth feel and overall acceptability by using Friedman test. Final sensory test was carried out for blend B against two popular commercial products (C1 and C2). The physical, chemical and microbiological analysis of blend B was done using standard methods and it was stored for one month under 4 °C, 25 °C and 35 °C conditions to evaluate the organoleptic and microbial properties at different storage temperatures. Results revealed that the best proportion of milk base to other ingredients of new formula was 1:1. There was no significant difference ($p>0.05$) between B and C1 while there was a significant difference ($p = 0.002$) between B and C2 and highest acceptance was observed for blend B and C1. The finished product had 34.2% crude protein, 15.6% fat, 2.8% ash, 6.74 pH, 0.1% titratable acidity, 2.0% moisture, 0.73 g/ml packed bulk density, 0.1 ml insolubility index, grade A of scorched particles. Coli-form, aerobic plate count, yeast and mold count were also conformed with the limits specified by SLS and shelf life study revealed that there was no significant difference ($p>0.05$) between samples stored under three temperature conditions, thus new product is microbiologically safe and stable for one month.

Key words: Cold water, Fresh beverage, Milk base powder, instant, New blend