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Process optimization for the development of Foxtail Millet - Milk solids dry mix

Anjana Sharma, B.Surendra Nath, B.V.Balasubramanyam, Menon Rekha R and Satish Kulkarni
National Dairy Research Institute, India

Foxtail Millet (Steria italica) is a popular staple diet in the northern parts of Karnataka and southern parts of Maharashtra. The millet considered as a healthy is rich in carbohydrate (61%), protein (12%), fiber (9%) and minerals (3.3%). It is traditionally consumed by cooking the grain in buttermilk. An attempt was made to develop ready-to-reconstitute dry mix using foxtail millet, skim milk powder and sugar for preparation of the beverage. The grain was roasted, milled and sieved to a fine powder. The yield of foxtail millet powder was 60%. A dry mix was prepared by blending equal quantities of foxtail millet powder, skim milk powder and sugar. The beverage of the desired quality could be produced by cooking 30 g of dry mix in 100 ml potable water for about 5 min or till the desired consistency was obtained. The dry mix had 1.56, 1.96, 14.54, 78.19, 3.75 and 0.048% of moisture, fat, protein, total carbohydrates, ash, and calcium respectively and 100 g of the mix provides about 390 K cal of energy. The product had a bulk density of 0.79 g/ml and water activity of 0.28. Titrable acidity (ml of 0.1 N NaOH/10 g total solids), pH and viscosity (cP) of the reconstituted product were observed to be 2.42, 6.50 and 220, respectively. The microbial analysis of the dry mix showed that total bacterial, coliform and yeast and molds counts were 4400, 50 and 25 cfu/g respectively. The reconstituted beverage prepared, however, was free from coliforms and yeast and molds.

Biography

Anjana Sharma has completed her Doctorate in Food Technology in 2010, at Food Science and Technology department, Bundelkhand University, Jhansi and her research topic was “Qualitative admixing of meat from different livestock species using DNA based methods”.Currently she has completed her ICAR Network project entitled “Network Project on R & D Support of Process Up-gradation of Indigenous Milk Products from National Dairy Research Institute, Bangalore. This abstract is a part of this research project.

anjanafst@gmail.com