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# *MANUFACTURE OF YOGHURT FROM COW'S MILK FORTIFIED WITH BUTTER MILK*

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***ABSTRACT***:

The effect of replacing skim milk powder that used to fortify cow's milk with spry dried butter milk on the quality of yoghurt was studied. Control yoghurt was made from 3.0% fat cow's milk fortified with 3% skim milk powder. Four treatments were made from that milk, but skim milk powder was replaced by butter milk at the rate of 25, 50, 75 and 100%. Replacement of skim milk powder with butter milk did not affect significantly total solids, total protein, ash contents, titratable acidity, viscosity and curd tension of the resultant yoghurt treatments. Whey syneresis decreased, while diacetyl and acetyl methyl carbinol (DA + AMC) increased by replacing skim milk powder with butter milk and this increase or decrease was proportional to the rate of replacement. Replacement of skim milk powder with butter milk up to 50% did not affect the scores of organoleptic properties, while increasing the replacement rate above that decreased those scores. Scores of organoleptic properties did not change significantly during the first 6 days of storage, then decreased slightly up to the end of storage period. Total solids, total protein, fat, ash contents did not change significantly during storage, while titratable acidity increased. Diacetyl and acetyl methyl carbinol increased as storage period proceeded and reach their maximum values at the sixth day then decreased up to the end of storage period. Whey syneresis decreased during the first 6 days of storage period, then increased up to the end of storage period. Total bacterial, lactobacilli and streptococci counts increased during the first 3 days of storage period, then decreased up to the end of storage period.

***Key words:*** Yoghurt, cow's milk, skim milk powder, butter milk.

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# *EFFECT OF REPLACING SKIM MILK POWDER WITH DRIED RETENTATE ON THE QUALITY OF ICE MILK*

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***ABSTRACT***:

: Four treatments of ice milk were prepared, i.e. control (C) in which skim milk powder (SMP) was used to supply the milk solids not fat and (T1, T2 and T3) treatments in which SMP was replaced with dried retentate (DR) (74% protein and 11.9% lactose) at the ratio of 50, 75 and 100%, respectively. Desserts made from mixes containing DR exhibite excellent melting qualities. No significant differences (P > 0.05) were found between the treatments in total solids contents, while fat, protein, ash contents, acidity, specific gravity, weight per gallon, viscosity and freezing point of the mix.., whipping ability, overrun and melting resistance were increased significantly (P â‰¤ 0.05) as the percent of DR increased. On the other hand, pH values and lactose content decreased (P â‰¤ 0.05) in control treatments with DR. The specific gravity, weight per gallon, overrun and melting resistance of the resultant ice milk were decreased significantly (P â‰¤ 0.05) with increasing DR. The resulting ice milk 75% DR showed the higher values in both essential and non essential amino acids and iron, zinc, selenium and manganese, but potassium decreased than control. Ice milk made with different levels of DR get higher scores for the body & texture and melting resistance than the control but scores for flavour and colour decreased. From this study it can be conclude that ice milk with high nutritional value and good sensory properties could be successfully made using DR as a source of SNF with percent up to 75% DR.

***Key words:*** Ice milk, skim milk powder, dried retentate.