

## PHYSICO-CHEMICAL PROPERTIES OF COW-SOY MILKS BLENDED YOGHURTS.

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### INTRODUCTION

Yoghurt processed exclusively from dairy milk constitutes the bulk of the cultured product in the market. However, quite a number of the consuming populace cannot afford the cultured product due to financial constraint. Majority of the Nigerian diets are carbohydrate-based and this has led to a number of health implications (protein energy malnutrition, susceptibility to diseases etc.) most especially amongst pregnant women, infants, and the elderly ones. Proteinous foods are high in cost and not widely available as carbohydrate foods<sup>1</sup>. Soybean is an excellent source of protein both in quality and quantity with high nutrient digestibility<sup>2</sup>. It has been reported as a good source of iron, thiamine, riboflavin and niacin and rich in polyunsaturated fatty acid. Honey is essentially a highly concentrated solution of two sugars dextrose and laevulose with other constituents such as flavoring materials, pigments, acids and minerals. It improves digestion, facilitate wound healing, and has sedative, antiarthritic, antibacterial effects and as a sweetener in various foods.<sup>2</sup> The objective of this study was to produce yoghurt-like products from blends of cow milk and soymilk.

This research work aims to come up with a good quality yoghurt from dairy and soy blend using honey as a sweetener thereby supplementing the nutrient value of the product, increase usage of soy bean and reducing dependence on dairy milk.

### MATERIALS AND METHOD

Fresh cow milk was purchased from nearby cattle rearers (Fulanis), while soy bean and honey were purchased from Minna main market, Niger State, Nigeria. Soybean was soaked, dehulled and blanched in potable water to reduce beany flavor, blanched bean were hulled wet and extended with water in ratio of 1:5 (w/v)%. The product was formulated in the ratio of 5:40:45 for honey soymilk and dairy milk respectively. While the control (normal yoghurt) was produced exclusively from dairy milk using granulated sugar as a sweetener. Moisture content, ash content, ether extract, titratable acidity, total soluble solid, crude protein and carbohydrate content were determined using standard methods described<sup>3</sup>. pH was determined using pH- Meter (Model 3015 Denway, London).

### RESULT AND DISCUSSION

**Table 1: Physico-chemical parameters of normal yoghurt and cow-soy milk blended.**

Sample	Total solids (%)	Moisture (%)	Ash (%)	Protein (%)	Lipid (%)	pH	Titratable Acidity (%)
NY	12.3±0.4	87.7±0.3	1.3±0.1	21.0±0.2	25.1±0.2	4.6±0.2	0.3±0.1
BY	19.3±0.2	80.6±0.4	2.5±0.2	21.2±0.3	23.1±0.3	4.4±0.1	0.5±0.2

Key: NY= Normal Yoghurt; BY= Blend yoghurt.

The result obtained (Table 1) shows that, the ash content of cow-soy milk blended yoghurt was higher than the ash content of normal yoghurt. This can be attributed to the inclusion of

honey which is a rich source of mineral<sup>2</sup>. In terms of crude protein and ether extract, the two products compared favorably. However, in terms of pH, blended cow-soy milk was found to be slightly acidic than the normal yoghurt. Inclusion of soy in the blend increased the total soluble solid by 7.09% above the normal yoghurt. The result suggests that a good quality yoghurt could be obtained from blends of cow milk and soy-milk.

## REFERENCE

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