19. Nutritional and sensory comparative profile analysis of plant-based milk (coconut milk) and animal milk (goat milk)

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Abstract

Animal milk is the most consumed milk globally, goat milk being one of them it makes up to 2% of milk consumed globally. Coconut milk is used as an ingredient in many foods around the world and is most popular in Asian countries. In Kenya, goat and coconut milk remain among the least consumed foods. Recently, an increase in health concerns such as cow milk allergy, lactose intolerance, and hypercholesterolemia, has forced consumers to opt for a more convenient milk alternative. Plant-based milk such as coconut milk has been one of the go-to alternatives. Both goat milk and coconut milk are rich in macronutrients and have different benefits to our health. Coconut milk has been associated with fitness, skin nourishment, digestion benefits and it rarely triggers allergic reactions. It has antiviral and anti-bacterial properties and may lower cholesterol levels in the body thus, reducing the risk of heart disease and stroke. On the other hand, goat milk is easily digestible, promotes growth, develops the immune system, and prevents diseases. It has been used to cure cow milk allergies, stunting, and wasting in children. The proximate composition was analysed using AOAC methods. The sensory acceptability was determined using 9-hedonic scale. The macronutrient composition of goat milk was as follows; protein 3.6%, fat 4.1%, carbohydrates 4.2%, moisture content 87.3% and ash 0.85% while coconut milk recorded 2.5% protein, 15% fat, 3.57% carbohydrates, 78.1% moisture content and 0.9 % ash. Nutritionally, goat and coconut milk were comparable except fat content in which coconut milk was 3 times higher than goat milk. From sensory analysis, consumers preferred goat milk compared to coconut milk.

Keywords: *Goat milk, coconut milk, macronutrients, consumer acceptability*