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INTRODUCTION

*Burukutu* and *pito* are two traditional beers produced from sorghum in Ghana. Both are marketed and consumed in an active state of fermentation as no attempt is made to arrest fermentation in order to preserve the product. This study was carried out to preserve *burukutu* by bottling in plastic and glass bottles in order to extend its shelf life (Atter *et al.*, 2014).

MATERIALS AND METHODS

*Burukutu* was pasteurized at 70°C for 15 min, filled and capped aseptically into sterilized plastic or glass bottles. The filled plastic bottles were immediately cooled whilst the glass bottles were further pasteurized at 85°C for 30 min. The bottled samples were stored by refrigeration (4°C) or on the shelf at ambient temperature (ca 28°C). The pH, total titratable acidity, ethanol content, colour, soluble solids, counts of aerobic mesophiles, yeast and moulds, coliforms and *E. coli* were monitored for 101 days. The samples were assessed by a sensory panel at 2,4,8 and 12 weeks of storage.

RESULTS AND DISCUSSION

No microbial counts were recorded immediately after the pasteurization process in all samples. The glass bottled refrigerated samples did not record any microbial growth throughout 101 days of storage. All the products were acceptable by a sensory panel at the end of the 12 weeks storage. The most preferred product was the glass bottled samples stored at 4°C.



Figure 6: Bottled *burukutu*

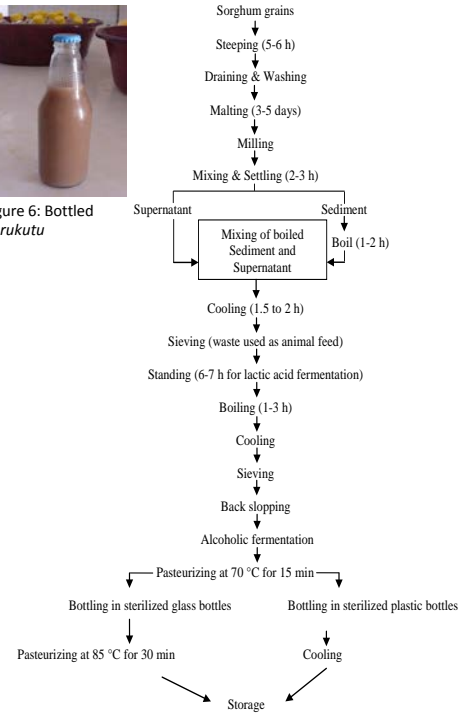


Figure 1: Flow chart for the production and bottling of *burukutu*

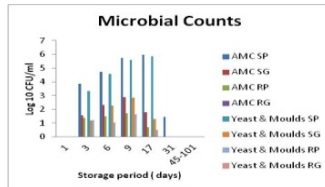


Figure 2: Counts of aerobic mesophiles, yeast and moulds during storage

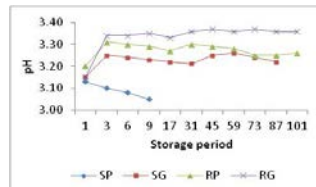


Figure 3: Changes in pH during storage

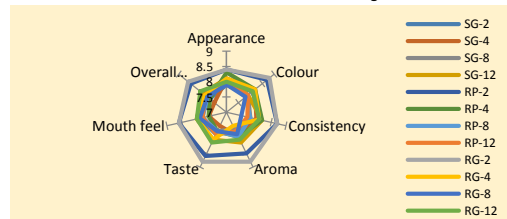


Figure 4: Sensory profile of bottled samples during storage of up to 12 weeks.

REFERENCE

Atter, A., Obiri-Danso, K. and Amoa-Awua, W. K. (2014). Microbiological and chemical processes associated with the production of *burukutu* a traditional beer in Ghana. *International Food Research Journal* 21(5): 1769-1776.

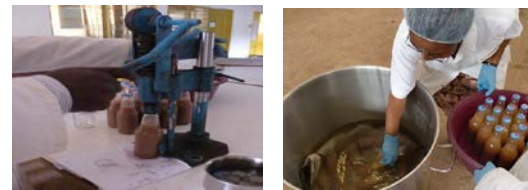


Figure 5: Bottling and pasteurization of *burukutu*

NOTE: S=Shelf Storage (Room Temperature at 28 °C); R=Refrigerated Storage (Climatic Chamber at 4°C); G=Glass Bottle; P=Plastic Bottle