ACCEPTABILITY OF WATERMELON-PINEAPPLE JUICE BLENDS

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Introduction

Fruits are good sources of minerals, vitamins and sugars [1]. Fruits are seasonal and highly susceptible to spoilage due to their high moisture content. In order that they are available all year round, fruits are often processed into different products such as nectars, cordials, squashes and juices.
Fruit juices are made from filtered fruit juice with no additives. However, sodium benzoate can be added as a preservative to extend the shelf life [2]. Properly pasteurised juice has a shelf life of several months. Most fruits can be used to make juice but the most popular ones are pineapple, orange, mango, grapefruit and passion fruit. Fruit juices constitute one of the most important foods for man as their intake promotes healthy living [3].
The objective of this study was to determine the acceptability of blends of watermelon and pineapple juices.

Materials and Methods

Fully matured, ripe, wholesome and fresh pineapple (*Ananas comosus*) and watermelon (*Citrullus Lanatus*) fruits were obtained from Kasuwar Gwari (Gwari Market), Minna, Niger State. The pineapple and watermelon fruits were washed and peeled with a stainless steel knife. The peeled pineapple and watermelon fruits were then cut into small pieces and their juices were extracted using an electrical juice extractor. The juices were collected into separate containers and sieved using a muslin cloth. The watermelon and pineapple juices were then blended together using ratios (watermelon:pineapple) 50:50, 60:40, 70:30, 80:20 and 90:10 respectively. 100% watermelon juice and 100% pineapple juice served as controls. The blends were then subjected to sensory evaluation by a twenty-member untrained panel using a nine point hedonic scale where nine represents like extremely and one represents dislike extremely [4]. Data obtained were analysed using analysis of variance (ANOVA) by means of SPSS statistical package version (16.66).

Results and Discussion

The sensory scores of the juice samples are shown in Table 1. Blending of the fruit juices significantly ($p<0.05$) affected the aroma, colour, taste, mouth feel, and overall acceptability of all the juice samples. The results showed that as the pineapple juice content increased, the sensory scores decreased. Hence 100% pineapple juice had the least score for all the attributes measured. This indicates that watermelon juice is preferred to pineapple juice. However all the samples were acceptable.

Table 1: Sensory scores of blends of watermelon-pineapple juice

	Samples						
Attribute	100:0	90:10	80:20	70:30	60:40	50:50	0:100
Aroma	7.80^{cd}	8.30^{d}	7.55^{bc}	7.40^{bc}	7.25^{bc}	6.95^{ab}	6.50^{a}
Colour	8.00^{c}	7.90^{c}	7.45^{bc}	7.20^{bc}	6.80^{b}	6.65^{ab}	5.95^{a}
Taste	8.20^{b}	8.25^{b}	7.70^{ab}	7.50^{bc}	7.30^{a}	7.35^{a}	7.35^{a}
Mouthfeel	7.90^{b}	7.75^{b}	7.55^{b}	7.25^{a}	7.30^{a}	7.20^{a}	7.10^{a}
Overall acceptability	7.75^{c}	8.05^{c}	7.48^{bc}	7.25^{ab}	7.16^{ab}	7.04^{ab}	6.66^{a}

Means in the same row not followed by the same superscript are significantly different ($p<0.05$)

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