

ABSTRACT

Carbonation (saturation of fruit beverage with CO₂) of fruit beverages has become one of the most applicable methods to add an extra value to the traditional fruit beverage. Coupling carbonation with the production process of ready to serve fruit beverages will result in increased consumer acceptability through a better mouth feel, taste and fizziness. Therefore this study was carried out to find out most suitable temperature of carbonation that is able to bring up the optimum carbonation level and to find out suitable fruit beverage types that can be effectively carbonated.

Limejuice filled into 160g bottles, were carbonated at the temperatures of 0.0°C, 4.2 °C, 7.4 °C, 10.0°C and 15.5°C. After 7 days of storage at ambient conditions beverages were evaluated for its colour, taste, fizziness, mouth feel and overall acceptability using 5-point Hedonic scale with trained sensory panel. Both the fruit juices carbonated at 0.0°C were used to assess the effectiveness of carbonation; their organoleptic properties were evaluated against non-carbonated juices.

Sensory evaluation tests results reveals the samples which are carbonated at 0°C possess most desirable colour, taste, fizziness, mouth feel and overall acceptability at 95% level of significance. Carbonated lime juice possessed better organoleptic qualities when compared to noncarbonated lime juice and the appearance, odour, flavour of carbonated mix fruit juice was lower than those of non carbonated mix fruit juice. So the study reveals that mixed fruit juice is not suitable for carbonation.