E2-26 : TROPICAL FRUIT JUICES - BUFFER PROPERTIES

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The variation of pH of fruit juices with added citric acid is not uniform. A buffering property of tropical fruit juices, resistance to alter the pH with added citric acid - is observed in certain pH ranges, indicated as follows:

Beli - 50% in pH 3.5 - 2.7, Woodapple 50% in pH 3.3 - 2.3, Mango - in pH 2.85 - 2.5 Lime in pH 2.9 - 2.45, Papaw - 66% in pH 3.0 - 2.6, Melon in pH 2.80 - 2.50, Pineapple in pH 3.1 - 2.3, Passion Fruit in pH 3.35-2.65, Tomato in pH 3.0 - 2.4, when 70% (w/v) Citric acid is used.

Thus preparation of fruit juices for preservation using tradionally used edible acids - Citric acid - tends to alter the delicate flavour of acidified fruit juices which is not acceptable organoleptically when adjusted to the desired pH level.

Also in preparation of food products of specified fruit content gives too high an acidity which is not acceptable organoleptically at the required pH to give a good texture.

Use of alternate fruit grade acidulents Lactic acid, Phosphoric acid - is suggested where a less acidic/ sour taste is desired.

The required pH to give good texture is achieved at very much lower acidity and without adversly affecting the taste with use of 20% Phosphoric acid.

A 100% preference was given by a 20 member panel for the mixed fruit gel whose pH was adjusted with Phosphoric acid in comparison to those adjusted with Citric acid to the same pH .