

Functional benefits of Inulin (In) and Fructooligosaccharides (FOS) in food processing and value addition

T V Hymavathi and P Megala

Acharya N G Ranga Agricultural University, India

The only prebiotics for which sufficient data have been generated to allow an evaluation of their possible classification as functional food ingredients are the Inulin- type fructans, which include native inulin, enzymatically hydrolyzed Inulin or oligofructose and synthetic fructooligosaccharides. These have innumerable health benefits. These are food components that are naturally present in many edible fruits and vegetables such as onions, garlic, leeks, asparagus, wheat, bananas, artichokes and chicory. The functional benefits in food processing are due to the properties of solubility, viscosity, gelation and water binding capacity.

The incorporation of IN and FOS at various percentages were found beneficial in improving the quality of the products with better acceptability and shelf

life. In the preparation of fruit beverages it adds soluble fibre, in ice creams it allows small ice crystal formation. In the production of yogurts they increase firmness and decrease syneresis. Inulin allows preparation of table spreads for the purpose of fat emulsion at about 2- 10 per cent level. Due to the hydration capacity of Inulin, it is used successfully with batters and spreadings and film coatings to reduce the oil uptake during frying operations, and reduces the total fat content of the final food product, enhancing crispiness. The better colour retention, texture improvement and improved sensorial acceptability are achieved in fruit bars with the addition of IN and FOS. The additions of these products in fruit bars helped to reduce the Glycemic Index of these bars.