

# **Probiotication of Nutritious Fruit and Vegetable Juices: An Alternative to Dairy-Based Probiotic Functional Products**

## **ABSTRACT**

Fruits and vegetables are widely known to be rich in nutrients, antioxidants, vitamins, dietary fiber, minerals, and a bioactive molecule, making them an essential component of a balanced diet with multiple documented positive effects on human health. The probiotication of plant-based juices for the production of functional and nutraceutical food serves as a healthy alternative to dairy probiotics. They are cholesterol free, lack several dairy allergens, and also encourage ingestion for people with lactose intolerance. This review highlights valuable claims regarding the efficacy of different probiotic strains on various diseases. A comprehensive nutrition comparison and the preference of plant-based over dairy probiotic drinks is also discussed, supported with updated market trends of probiotic drinks (dairy and non-dairy based). An extensive compilation of current plant-based probiotic drinks that are available in markets around the world is listed as a reference. The fermentability of carbon sources by probiotic microorganisms is crucial in addressing the development of plant-based drinks. Therefore, the pathway involved in metabolism of sucrose, glucose, fructose, and galactose in fruit and vegetable juice was also underlined. Finally, the key factors in monitoring the quality of probiotic products such as total soluble solids, sugar consumption, titratable acidity, pH, and stability at low storage temperatures were outlined.