Comparison of the nutrient content of fresh fruit juices vs commercial fruit juices

Densupsoontorn N.\textsuperscript{a}, Thamonsiri N.\textsuperscript{a}, Phosuya P.\textsuperscript{b}, Patraarat S.\textsuperscript{a}, Suwanthol L.\textsuperscript{d}, Jirapinyo P.\textsuperscript{a}, Wongarn R.\textsuperscript{a}, Tritiprat A.\textsuperscript{c}, Pidatcha P.\textsuperscript{d}

\textsuperscript{a} Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand
\textsuperscript{b} Pediatrics Service, Mukdahan Hospital, Mukdahan 49000, Thailand
\textsuperscript{c} Pediatrics Service, Taksin Hospital, Department of Medical Services, Bangkok 10600, Thailand
\textsuperscript{d} Department of Clinical Chemistry, Faculty of Medical Technology, Mahidol University, Bangkok 10700, Thailand

Abstract

Objective: To compare the types and quantities of carbohydrate, electrolytes, pH and osmolarity of fresh fruit juices and commercial fruit juices.

Material and Method: Forty kinds of fresh fruits available in Thai markets were analyzed for types and quantities of carbohydrate, electrolyte, pH and osmolarity and compared with previously obtained data for commercial fruit juices.

Results: Most fresh fruit juices did not contain sucrose, whereas, commercial fruit juices mostly have sucrose in the range of 3-112 g/L. Although both fruit juices were acidic (pH varied from 3.6-6.7 and 3.2-5.8 of fresh juice and commercial juice), fresh fruit juices had a more neutral pH than commercial fruit juices. Apple, guava, orange, pear, and pineapple juices from commercial fruit juices had a high osmolarity compared with fresh fruit juices. All types of fresh fruit juices contained less sodium than commercial ones, whereas, most fresh fruit juices contained more potassium, phosphorus, and magnesium than commercial fluids.

Conclusion: The nutrient content of fresh fruit juices and commercial fruit juices from the same kinds of fruits are not the same, possibly due to the manufacturing process. Therefore, physicians should know the composition of fruit juices in order to advise patients properly.

Keywords: Commercial Fruit Juices; Fresh Fruit Juices; Fructose; Glucose; Osmolarity; pH; Sorbitol; Sucrose

Journal of the Medical Association of Thailand. 2002; 85(Suppl. 2) : S732-S738