

ESTIMATION OF FREE FRUCTOSE, GLUCOSE AND BENZOIC ACID CONTENTS IN COMMERCIALY AVAILABLE FRUIT NECTARS AND JUICES IN ANURADHAPURA TOWN AREA

R.I. Hettiarachchi¹, S.P.A.S. Senadheera², W.A.G.E. Wejelath¹ and G.C. Thilakarathna¹

¹*Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.*

²*Department of Biochemistry, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.*

Fructose, glucose, and benzoic acid are constituents usually found in fruit-based beverages and their excessive intake leads to adverse health effects. Existing levels of these substances are not claimed exactly on the labels of fruit-based beverages found in the Sri Lankan market. Therefore, this study was conducted to estimate the levels of free fructose, glucose, and benzoic acid in commercially available fruit juices and nectars in the *Anuradhapura* town area. Available brands of fruit juices [Mixed Fruit Juice (MFJ) and Mango Juice (MJ)] and fruit nectars [Mixed Fruit Nectar (MFN) and Mango Nectar (MN)] were selected through a pre-validated questionnaire. Free fructose of MNs and MFNs ranged between of 5.71 ± 0.14 to 12.71 ± 0.32 and 6.09 ± 0.40 to 12.49 ± 0.43 g per 200 mL, respectively. The free glucose content of MNs ranged between 3.49 ± 1.07 to 8.27 ± 0.55 g per 200 mL and for MFNs, it was 5.86 ± 0.87 to 17.14 ± 1.12 g per 200 ml. Free fructose in MJs and MFJs ranged between of 6.46 ± 0.17 to 7.53 ± 0.11 and 6.63 ± 0.73 to 7.36 ± 1.54 g per 200 ml, respectively. The sum of free fructose and glucose per serving of MN fulfils 30.67 - 84.10% and MFN fulfils 39.83 - 76.67% of the safe level of free sugars per day. Data revealed that free fructose and glucose levels among the selected brands of MN, MFN, MJ, and MFJ were significantly different ($p < 0.05$) to each other. Further, the benzoic acid contents in four brands of MN, MFN, and three brands of MJ and MFJ was also significantly different ($p < 0.05$). Owing to the substantial variations of fructose, glucose, and benzoic acid levels of selected beverages, concerning the health aspects, it is important to update those details in food labelling.

Keywords: Benzoic acid, Free fructose, Free glucose, Fruit juice, Fruit nectar