CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY

journalhomepage:**http://chimie-biologie.ubm.ro/carpathian_journal/index.html**

# DETERMINATION OF PRESERVATIVES AND PHYSICOCHEMICAL PROPERTIES OF FRUIT JUICE-BASED BEVERAGES

**Vern Mein Wong[1], Lejaniya Abdul Kalam Saleena[1], Pui Liew Phing[1]✉**

[1]*Department of Food Science and Nutrition, Faculty of Applied Sciences, UCSI University, 56000 Cheras, Kuala Lumpur, Malaysia*

✉*puilp@ucsiuniversity.edu.my; zoepui123@gmaill.com*

https://doi.org/10.34302/crpjfst/2023.15.1.17

**Article history:**
Received:
18 June 2022
Accepted:
1 December 2022

**Keywords:**
*Benzoic acid;*
*Fruit juice;*
*Physicochemical properties;*
*Sorbic acid.*

**ABSTRACT**

Fruit juices and juice type beverages may have benzoates, sorbates and sulphur dioxide as preservatives. Five different categories of fruit juice-based beverages, including fruit juices, fruit nectars, fruit juice drinks, fruit drinks, and fruit cordials, were analyzed for benzoic acid, sorbic acid, and physicochemical properties such as pH, titratable acidity, degree Brix, and sugar-to-acid ratio. 15 samples were detected to contain benzoic acid while 12 samples were found to contain sorbic acid. A combination of benzoic and sorbic acids were detected in 12 samples and the remaining 36 samples did not contain any benzoic acid or sorbic acid. All the fruit juice-based beverages complied with Food Regulations 1985 for benzoic acid or sorbic acid. Brand K tropical fruit juice drink base is the only product that did not comply with the specification of CODEX standard. No violation of labelling requirement was observed in all samples. All samples tested were considered as acid food as their pH readings were below 4.6. The titratable acidity of fruit juice-based beverages ranged from 0.14 to 2.71 % (w/v). The range of Brix values measured was from 10.2 to 60.9 °Brix. Sugar-to-acid ratios calculated were ranged from 16.9 to 275.7.