



EVALUATION OF ASCORBIC ACID CONTENT AND TOTAL ANTIOXIDANT STATUS OF FRESH-SQUEEZED ORANGE JUICES

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ABSTRACT

This study aimed to evaluate i) consumer behaviour regarding fruit juices and ii) vitamin C content and total antioxidant status (TAS) of fresh-squeezed orange juices. To determine consumption habits of consumers regarding fruit juices, a questionnaire was applied. Fresh-squeezed orange juices were supplied from the stands, cafes and patisseries/bakeries/pastry shops. Ready-made orange juices were purchased from the markets. The pH, ascorbic acid (mg/100 g) and TAS (mmol/L) of orange juices were analyzed. This study found that there was a tendency towards fresh-squeezed juice types especially orange juice and the main motivational factors were naturalness/freshness, taste perceptions, vitamin C content and positive health effects. It was shown that ascorbic acid contents (42.4 ± 6.71 vs. 17.0 ± 11.09 mg) and TAS values (3.3 ± 0.35 vs. 1.2 ± 0.90 mmol/L) of fresh-squeezed orange juices were higher compared to ready-made orange juices and vary depending on the place of purchase ($p < 0.05$). As a result of keeping the juices although they were freshly squeezed, their ascorbic acid contents decreased. Also, there was a positive correlation between ascorbic acid and TAS values in all orange juices ($r: 0.902$, $p < 0.05$). Supporting the perception of consumers, ascorbic acid content and antioxidant capacities of fresh-squeezed orange juices were higher compared to ready-made juices, and the fruit juices must be consumed without being kept even if they are freshly squeezed.