IMPACT OF JUICING TECHNIQUES AND STORAGE TIME ON TOTAL PHENOLIC CONTENT OF SELECTED JUICES

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Introduction

- Escalating health consciousness among the consumers as well as rising demand for “on-the-go” beverages lead to growing market offer of fruit and vegetable juices.
- Cold-pressed juices have gain attention and are claimed to have higher nutritional value compared to regular (normal) centrifuged ones.

Methods

- Fruit (pomegranate) and vegetable (carrot and beetroot) species were selected for juices preparation using: a cold-pressed juicer, a normal centrifugal juicer, and a citrus press.
- The aim was to evaluate total phenolic content (TPC) of freshly prepared unpasteurized juices. TPC was investigated by Folin-Ciocalteu assay. Additionally, the impact of home refrigeration-storage conditions on the TPC of analysed juices was investigated.

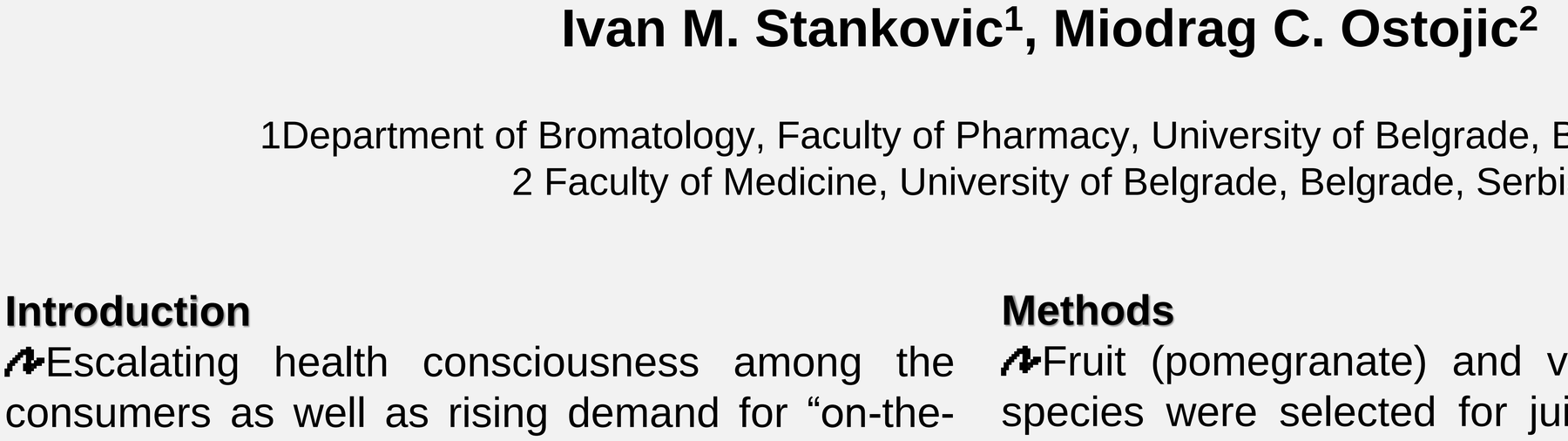

Fig. 1. Total phenolic content of vegetable (A) and fruit juices (B) extracted by cold-pressed juicer, normal centrifugal juicer, and citrus press.

Pomegranate juices had significantly higher TPC in comparison to selected vegetable juices ($p<0.01$).

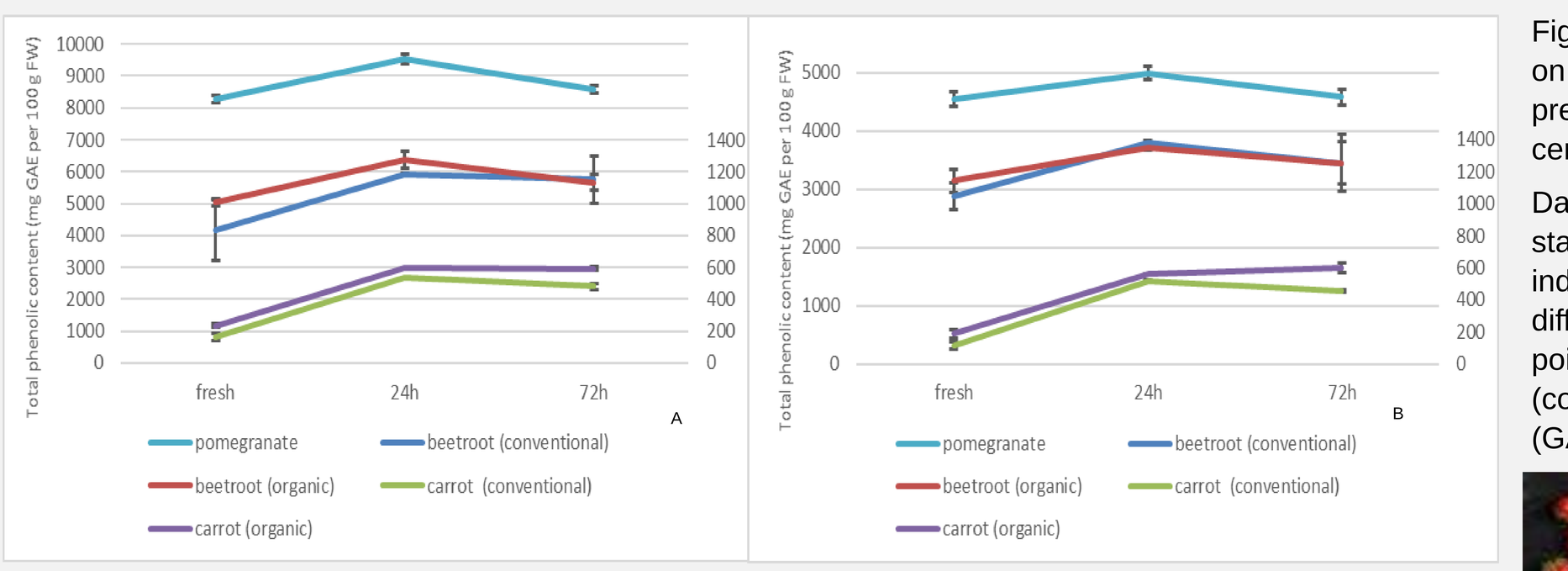

Fig. 2. Effect of refrigeration-storage on total phenolic content of cold-press juices (A) and regular (normal) centrifuged juices (B).

Data are presented as mean_ standard deviation (SD) of three independent replicates; no significant differences were observed at time-point compared to the fresh juice (control) (Student's t-test, $p<0.05$). (GAE: gallic acid equivalent).

Conclusions

- Comparison of juices processed using different extraction methods and coming from different (organic / conventional) grown produce, did not allow making conclusions about superiority of a particular product.