

**11<sup>th</sup> Central European Congress on  
Food and Nutrition**

**CEFood Congress Book**

“Food, technology and nutrition for  
healthy people in a healthy environment“

**Editors:**

Peter Raspor, Irena Vovk, Andrej Ovca, Sonja  
Smole Možina, Bojan Butinar, Mojca Jevšnik

**Ljubljana, 2022**

11<sup>th</sup> Central European Congress on Food and Nutrition  
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Each member of the POC will opening her/his unique capabilities for common mission adding to the mission comparable effort with all members of the team.

Each member of the POC is responsible for the representation and promotion of the congress mission in its' own professional environment.

The POC is responsible for all organizing aspects of the CEFood2022, such as: financial management, logistics, scientific program, abstract management, sponsorship and exhibitor management, communications, marketing and onsite management at the conference;

The POC is responsible for developing a well-balanced, high-quality scientific program together with Advisory Committee to be presented at the

## P-38

### EFFECT OF ANTHOCYANIN-RICH BRINE ON TECHNO-FUNCTIONAL AND SENSORY PROPERTIES OF PICKLED BABY CORN

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Pickling is one of the oldest preservation methods of food by fermentation. Pickled vegetables are good sources of natural antioxidants such as vitamins, carotenoids, flavonoids and other phenolic compounds. However, in the phase of cob development before fertilization in maize grain, the synthesis of bioactive compounds that affect its final color has not yet taken place. Many studies showed that black soybean seed coat, rich in polyphenols and dietary fibres, can be used as bioactive ingredients in functional foods and pharmaceutical products targeting different health problems. Having in mind the great potential for the use of black soybean seed coat as an ingredient in food products the objective of this study was to investigate the effect of anthocyanin-rich brine from black soybean seed coat on techno-functional properties of pickled baby corn, as well as their sensory properties. The experimental material consisted of three maize hybrids (*Zea mays* L.) and one soya genotype recently developed at the Maize Research Institute, Zemun Polje, in the vicinity of Belgrade, Serbia. Since the high content of soluble-free phenolic compounds (in total 40762.2 mg CE /kg), primarily anthocyanins (in total 11882.9 mg CGE /kg), was detected in the black soybean coat a very high antioxidant capacity (399.54 mmol Trolox Eq /kg) was expected. The addition of black soybean coat had a positive impact on anthocyanin content in Baby corn samples and its color. In this study, we observed three anthocyanins in Baby corn samples. The major anthocyanin was cyanidin 3-glucoside which ranged from 184.62 to 247.47 µg/g. It was followed by delphinidin 3-glucoside, which ranged from 12.24 to 34.93 µg/g and pelargonidin 3-glucoside, which ranged from 12.50 to 17.61 µg/g. The addition of anthocyanin-rich soybean coat changed the baby corn cobs' color to a red range. Baby corn samples had CIE a\* values more than 16-fold higher than the control Baby corn sample. In addition, the control Baby corn sample had yellow color values CIE b\* higher by 86.3%, 79.8%, and 85.0% than popping, semi-flint, and sweet Baby corn samples with salt and sugar, respectively.