



The First North and East
European Congress on Food

NEEFood - 2012

April 22 -24, 2012
St. Petersburg, Russia

Book of Abstracts



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St. Petersburg State
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- 17.45 -18.00 **The comparison of pumpkin cultivar chemical composition.**
Solvita Kampuse.
Latvia University of Agriculture, Jelgava, Latvia.
- 18.00 -18.15 **Determination Of The Drying Kinetics During Freeze Drying Of Pumpkin Slices.**
Gulsah Caliskan.
Ege University, Izmir, Turkey

Section B

- 17.00 -17.15 **Color correction processes in high quality and safety meat products production by activated liquid systems.**
Andrey Bratsikhin.
North-Caucasus State Technical University, Stavropol, Russia,
- 17.15 -17.30 **The Effects of Moderate Electrical Treatment on The Quality of Tomato Juice.**
Ahsen Rayman.
Ege University, Izmir, Turkey.
- 17.30 -17.45 **Ionizing irradiation post-harvest processing of chestnuts: Effects of gamma and e-beam technologies on physico-chemical parameters.**
Amilcar L. Antonio.
Instituto Politécnico de Bragança, Portugal and Universidade de Salamanca, Spain.
- 17.45 -18.00 **Impact of processing in orange juice quality.**
Galina Zvaigzne.
Latvia University of Agriculture, Jelgava, Latvia.
- 18.00 -18.15 **Drying of Bay Leaves in Conventional Oven and Microwave Oven.**
Hülya Çakmak. .
Ege University, Izmir, Turkey

19.30 -22.30 Congress Dinner

forms the best condition for nitrite sodium transformation to the nitrosomyoglobin and it introduce to color form process. The remains of nitrite sodium in meat products are a half of normative-technical quantity. It is conformed the denitification feature of activated brines. The results of research are used in whole-muscle meat products production.

THE EFFECTS OF MODERATE ELECTRICAL TREATMENT ON THE QUALITY OF TOMATO JUICE

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In this research the optimization of electroplasmolysis of tomato juice was investigated by applying 'Response Surface Method'. Central composite rotatable design ($\lambda=1$) was used for optimization. Optimization factors were selected as voltage gradient (10-75 V/cm) and process time (1-12 s) whereas response were yield, colour, viscosity, serum separation, pulp ratio, turbidity and total dry matter content. Low voltage gradient and short process time had an enhancing effect on the yield and viscosity values of the tomato juice processed by electroplasmolysis treatment. The optimum heating condition was found as 10 V/cm and 9.49 s for electroplasmolysis treatment of tomato juice for the range of applied conditions. The effects of moderate electrical treatment was investigated on the yield and quality of tomato juice. At this optimum condition, it is found that yield and viscosity will be % 68.89 and 13.18 s respectively and were checked experimentally. Production of tomato juice was carried out by using optimum conditions. Trials were done in four application groups; single electrical treatment group (EP); conventional thermal heating group (PAS), combination group was electroplasmolysis and conventional thermal heating (EP+PAS) and control group (Control). After productions tomato juices were stored for 1 month at +4°C. PME activity, total pectin, soluble solid, pH, pulp content, turbidity, viscosity and color (a^* , b^*) values were determined. Finally the results indicate that juice yield and functional properties increased by EP applications. In addition, quality characteristics were found better in EP+PAS group when compared with the traditional pasteurized tomato juice during storage

IONIZING IRRADIATION POST-HARVEST PROCESSING OF CHESTNUTS: EFFECTS OF GAMMA AND E-BEAM TECHNOLOGIES ON PHYSICO-CHEMICAL PARAMETERS

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Chestnut fruit must be postharvest treated to meet the international fitossanitary regulations during exportation. Chemical fumigation with methyl bromide was the most common practice for elimination of insects in those fruits. Nevertheless, it is a toxic product for the operators and was recently banned by the european legislation (March 2010), following the international recommendations of Montreal Protocol on ozone depleting substances. Therefore, it becomes essential to find alternative preservation methodologies. Irradiation might be a good alternative; its use by several industries on different food products could confirm the viability of such treatment in chestnut fruits. The effects of storage time (0 and 30 days at 4 oC) and irradiation dose (gamma and e-beam) up to 3 kGy on physico-chemical parameters were evaluated. Those parameters included colour, texture, moisture, nutritional value, sugars, fatty acids and tocopherols [1-3].

After analysis of the results, it was observed that irradiation at up to 3 kGy did not affect the mentioned parameters, being more relevant the effects of storage time. Overall, the irradiation might be a promising alternative for post-harvest chestnuts processing, without altering the main physico-chemical characteristics.

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References: [1] Antonio et al. Food Chem. Toxicol., 49 (2011) 1918-1923. [2] Fernandes et al. Food Chem. Toxicol. 49 (2011) 2429-2432. [3] Fernandes et al. J. Agric. Food Chem. 2011, 59, 10028–10033.

IMPACT OF PROCESSING IN ORANGE JUICE QUALITY

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Orange and the juice from orange are popular products in the world. At the fruit processor, the loss of vitamin C (ascorbic acid) from orange fruit to frozen orange juice concentrate is generally negligible when right processing conditions and short residence times before concentration and freezing are used. During reconstitution of