

CASEE
Central and South Eastern Europe



CASEE CONFERENCE 2013

**4th CASEE Conference
"Food and Biomass Production
- Basis for a Sustainable
Rural Development»**

Book of Abstracts

**July 1-3, 2013
University of Zagreb
Faculty of Agriculture
Croatia**

P2.11**The influence of calcium carbonate-wheat flour mix addition on sunflower halva stability and texture***Vlad Muresan, Emil Racolta, Sevasita Muste, Sabine Danthine, Christophe Blecker.**USAMV - University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Cluj-Napoca, Romania.**Corresponding author:**Vlad Muresan, Calea Manastur 3-5, Cluj-Napoca, Romania**Email: vlad.muresan@usamvcluj.ro, Phone: 0040741246880***Summary**

Halva (also called halawa, halaweh, havah) belongs to an old confectionery product group with their origin disputed between Arabic and Indian populations. It consists of a mixture of honey, sugar or fruits syrups with different types of flour including semolina, rice, whole wheat, and maize or most commonly nut pastes. Worldwide, most known halva is the sesame based halva which derives its hard texture from a mixture of cooked sugar syrup, soapwort (*Saponaria officinalis*) root extract and sesame paste. This conventional halva, made of sesame seeds, is a very popular confectionery product in North African and Middle East countries, from where, probably entered Eastern European countries. In this region the conventional halva recipe had been modified since years by replacing sesame with sunflower, due to comparable taste and high availability of the last, East European countries gathering more than half of sunflower world production. One way to better valorize this commodity and to increase its demand will be an improvement of sunflower halva quality. Calcium carbonate is a food additive used as an acidity regulator, anticaking agent, stabilizer or as a food coloring substance and is approved for usage in the EU with not specified acceptable daily intake. The aim of this paper was to assess the influence of a calcium carbonate-wheat flour mix (7.6% wheat flour) addition on sunflower halva stability and texture. Control and mix containing (MC) sunflower halva samples were manufactured by traditional technology. Chemical composition of both samples type was performed; fat, protein, ash and moisture content were assessed by Soxhlet, Kjeldahl, incineration at 600°C and drying oven method, respectively. A stability test was conducted by weighing the amount of separated oil during a 21 days period at room temperature. Sunflower halva samples texture was analyzed on rectangular blocks of 110x80x40 mm by an instrumental method using a multiple puncture probe. Chemical analysis revealed close chemical composition for both samples with 35.13 - 41.18 % total fat, 10.48 - 11.60 % protein, 2.87 - 4.9 % ash, 3.1 - 3.84 % moisture, respectively. However, the hardness of the fresh MC samples was lower than the one registered for control samples and the amount of oil separated (4.6 %) after 21 days of storage at room temperature from the MC sunflower halva samples was reduced compared to control samples (7.06 %). Overall, the MC sunflower halva sample showed an improved lighter color, stability and texture.