



E560

Clostridium botulinum occurrence in Kosovo honey samples

Aliu H.¹, Gecaj RM.^{1,2}, Kumru S.³, Balta ZD.³, Balta F.³

¹Department of Veterinary Medicine, Faculty of Agriculture and Veterinary, University of Pristina, Pristina, Kosovo

²Department of Food Technology and Biotechnology, Faculty of Agriculture and Veterinary, University of Pristina, Pristina, Kosovo

³Department of Fisheries, Recep Tayyip Erdogan University, Rize, Turkey

The aim of this study was an examination of 30 polyfloral honey samples collected directly from small Kosovo beekeepers (artisanal producers) to determine the presence of *Clostridium botulinum*. The Kosovo territory was divided into 30 equal surface units spanning the entire region of Kosovo. Samples were collected from July to September 2018 and dark stored at 8 °C until further analysis. The direct centrifugation method was used for culturing the *C. Botulinum* and to confirm the presence of *C. Botulinum*, cultured bacterial colonies were subjected to Gram's stain, catalase, and oxidase tests. From identified colonies, enrichment culture was prepared, DNA extracted and the amplification of the 16S rRNA gene with two sets of universal 16S rRNA bacterial primers was performed. After an electrophoresis step to detect specific bands of 1450 bp for 16S RNA, the PCR products were sequenced at MacroGen-Europe and phylogenetic relationships of 16S rRNA sequences were estimated using MEGA X software. In this first representative study on the occurrence of *C. botulinum* in honey collected in Kosovo, sequence analyzing results showed that isolates from 11 samples (K18, K9, K11, K3B, K20S, K17P, K29, K22, K25, K4, and K23) were similar to *C. botulinum* via nearly 96% identities.

E561

Preliminary experiments for the rheological study of oleogels

Homolya, Sz.¹, Badakné, K. K.¹, Vozáry, E.², Kaszab, T.², Lambertné, M. A.¹

1 - Department of Grain and Industrial Plant Processing, Institute of Food Science and Technology, Hungarian University of Agriculture and Life Sciences

2 - Department of Food Measurement and Process Control, Institute of Food Science and Technology, Hungarian University of Agriculture and Life Sciences

In our research, we investigated blends of fully hydrogenated rapeseed oil (25, 30, 35%) and non-hydrogenated high oleic sunflower oil, as well as beeswax (15%) and high oleic sunflower oil as possible oleogel for palm oil alternatives. The rheological properties of these oleogels were compared with the rheological properties of palm oil and a commercially available confectionery fat.

With an Anton-Paar MCR302 oscillatory rheometer, we determined the flow curve of oleogels, palm oil and confectionery fat in the shear rate range ($\dot{\gamma} = 0,1 - 100$ 1/s), as well as their storage modulus (G') and loss modulus (G'') using amplitude sweep method. For recording oscillatory shear curves, we prepared a loading template so that the measurement is performed on a sample loaded as evenly as possible. The flow curves were approximated with rheological models using the Excel Solver program. The linear viscoelastic limit (LVER) value was determined from the curves obtained by amplitude sweeping.

The confectionery fat showed rheological similarity with palm oil, however, this type of sample was the furthest from the oleogels in rheological properties. Based on the results the sample containing 35% fully hydrogenated rapeseed oil and the beeswax oleogel might be suitable as palm oil substitutes.

BIOSYSFOODENG 2023

9th June, 2023. LURDY CONFERENCE AND EVENT CENTRE, BUDAPEST, HUNGARY