**Research on the texture and antioxidant properties of model protein-hydrocolloid-salt emulsions**

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In order to create the base to sausage analogues, rapeseed oil-water emulsions contain: protein, carrageenan, methylcellulose and sodium chloride were tested. The experiment was planned using the response surface methodology for three variables: protein, oil and carrageenan concentrations. Research work consisted of 15 variants for each kind of plant protein: soy, potato and pea. The concentration of protein and oil in the emulsions ranged 10% - 20%, carrageenan 1% - 3%. In all variants, the concentration of methylcellulose and salt was at the same level, 1,5% and 1% respectively. The emulsions were heat treated at temperature of 90oC. An analysis of the texture properties such as hardness, elasticity, gumminess, chewiness, cohesion, of the emulsions was performed by Zwick/Roell testing equipment. The analysis showed that the primary texture properties are influenced by the concentration of protein and carrageenan. The hardest systems are obtained in the case of potato protein, while soy and pea proteins gave values of 30% and 50% lower. A six-person team analysed the texture profile of the systems according to the PN-ISO 11035, 11036 standards, including the identification and selection of descriptors. Analysis of antioxidant activity of emulsions were carried out by ABTS and FRAP methods.

The study was financially supported by European Regional Development Fund (Europejski Fundusz Rozwoju Regionalnego) RPMP.01.02.01-12-0286/17 – “Innovative analogues of meat products for people on vegan diet”