

26<sup>th</sup> Congress of SCTM

Sept. 20-23, 2023, Metropol Lake Resort, Ohrid, N. Macedonia

## Sensory Analysis of Meat Analogues – Veggie Burgers

M. Arizanova\*, D. Kostadinova, B. Ristovski, E. Velickova

Department of Food Technology and Biotechnology, Faculty of Technology and Metallurgy, Ss. Cyril and Methodius University in Skopje, Ruger Boskovic 16, 1000 Skopje, Republic of North Macedonia

## <u>\*milica@tmf.ukim.edu.mk</u>

The surging trend of plant-based food regimens has stimulated the innovation and improvement of alternative meat products. In this regard, meat analogues such as veggie burgers have emerged as a notable choice for consumers that are perpetually seeking healthier and more environmentally sustainable dietary choices<sup>1-4</sup>.

In order to successfully incorporate these analogues into the mainstream portions, an understanding of their sensory characteristics is crucial. Therefore, a comprehensive sensory analysis of veggie burgers has been conducted, including the perceptions and preferences of individuals from different age ranges. Four types of veggie burgers were prepared, using rice, rye, wheat and oats as a basis for the burger. The processing of the veggie burgers included baking at 200  $\Box$ C. After the burgers were cooled down, the sensory analysis was performed. It included a structured questionnaire in which subjective perceptions of taste, texture, colour, aroma and overall palatability on a hedonic scale were evaluated.

The results disclosed some interesting observations about the sensory characteristics of the meat analogues. Furthermore, it included a discussion about the preference of the analogues over the original meat burgers. The results from the questionnaire showed that the majority of the participants preferred the original meat burgers over the veggie burgers and were not likely to purchase plant-based meat. This way, through comprehension of individuals' preferences, the food manufacturers can modify their products to satisfy the shifting demands of the consumers<sup>5</sup>.

Keywords: veggie burger, meat analogues, sensory analysis

## References

[1] Du, Q., Tu, M., Liu, J., Ding, Y., Zeng, X., Pan, D. (2023). Plant-based meat analogs and fat substitutes, structuring technology and protein digestion: A review. Food Res. Int., 170, 112959.doi: 10.1016/j.foodres.2023.112959

[2] R. Chilón-Llico, L. Siguas-Cruzado, C. R. Apaza-Humerez , W. C. Morales-García, R. J. Silva-Paz, Protein Quality and Sensory Perception of Hamburgers Based on Quinoa, Lupin and Corn, Foods, 2022

[3] A. A. Nolden, C. G. Forde, The Nutritional Quality of Plant-Based Foods, Sustainability, 2023

[4] K. Kołodziejczak , A. Onopiuk, A. Szpicer, A. Poltorak, Meat Analogues in the Perspective of Recent Scientific Research: A Review, Foods, 2021

[5] E. Cole, N. Goeler-Slough, A. Cox, A. Nolden, Examination of the nutritional composition of alternative beef burgers available in the United States, International Journal of Food Sciences and Nutrition, 2021