

## ABSTRACT

**The main objective:** The goal of the thesis is to evaluate the nutritional quality of selected plant-based meat alternatives available on the Czech market, including the evaluation of the degree of their fortification with nutrients that may be deficient in people with a plant-based diet. A summary table containing basic data, nutritional values, and the composition of the individual examined products will be completed.

**Methods:** A total of 225 plant-based meat alternatives (PBMA) offered in several selected online stores in the Czech Republic were included in the study. PBMA of the 1<sup>st</sup> or 2<sup>nd</sup> generation – those that mimic meat and meat products with their properties - were included. Data were collected in a summary table in Microsoft Excel. Basic data, scoring systems, nutritional data, protein-providing ingredients, raw materials, additives, and fortifying ingredients were collected. PBMA were divided into categories according to the imitated meat product. The data were collected between December 2023 and April 2024 and were subsequently evaluated in the R programming language.

**Results:** The set of investigated meat alternatives is not a homogeneous group in terms of nutritional values. The energy value and the amount of sugar are the only nutritional values, whose amounts do not differ with statistical significance within individual product groups. Only 17.8 % of the investigated PBMA were enriched with at least one potentially deficient micronutrient. The most common fortification concerns vitamin B12, present in 12.0 % of the products. The most frequently used source of protein was soy protein, followed by wheat and pea proteins. The most used fats are rapeseed, sunflower, and coconut oil, respectively. The most used additive was methylcellulose. According to the Nutri-Score, the most nutritionally valuable product categories include the categories of PBMA to medallions, loin meat, roasts, and ribs. The average Nutri-Score of all the examined products is between Nutri-Score B and C.

**Conclusion:** The PBMA offered in the Czech Republic cannot be considered a uniform group of products, and it is therefore inadequate to judge other PBMA based on the nutritional quality of one of them. Most products are not fortified with potentially deficient micronutrients, therefore adequate supplementation should be considered for people with a plant-based diet.

**Key words:** Plant-based diet, veganism, plant-based meat alternatives, food, highly processed food