Abstract

Meat alternatives are playing an increasingly important role not only in the diet of vegetarians and vegans, their nutritional value and sensory properties are often a matter of discussion.

The aim of this thesis was to evaluate nutritional and sensory value of meat analogues nutritionally and the conclusion of the paper is dedicated to the comparison of nutritional values with those of beef. A total of 17 samples were analyzed, most of the analysis is devoted to 16 meat alternatives, the sensory analysis included a sample of animal meat for comparison of organoleptic properties. Several methods were used to determine the nutritional values in the samples: gravimetry (determination of dry matter content), Soxhlet extraction (determination of fat content), Kjeldahl method (determination of protein content), GC/FID (determination of fatty acid composition), sensory analysis. The determination of dry matter, protein and fat provided quantitative data which were used to calculate the carbohydrate content.

The fat content of the meat alternatives evaluated ranged from 0,2-22,5 g/100 g, the protein content ranged from 6,7-57,4 g/100 g and the carbohydrate content from 1,15-37,8 g/100 g. The ratio of nutrients in the alternatives was more diverse than in the animal meat. The analysis of fatty acid composition of all samples showed a saturated fatty acid content of less than 50 % and a *trans* fatty acid content of less than 1 %. In the sensory analysis, 3 plant based meat alternatives outperformed the animal meat sample.

Compared to animal meat, meat alternatives have both advantages and disadvantages from a nutritional point of view, but most of them have been found to be of lower sensory quality.

Keywords: Meat alternatives, nutritional evaluation, GC-FID, sensory analysis