**PREMA STANDARDIZACIJI PČELINJEG POLENA**

**TOWARDS BEE POLLEN STANDARDIZATION**

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**Abstract**

Bee pollen is a bee product with variety of nutrients beneficial in human diet. Several studies confirm its anti-inflammatory, antimicrobial and antioxidant qualities. Bee pollen is becoming more and more recognized in daily nutrition and in different alternative diets. Final product is a mixture of different pollen grains and consequently chemical and nutritional composition of bee pollen varies greatly and depends on botanical and geographical origin, harvesting season, environmental conditions and beekeeper practice. Furthermore, there are no legal standards of bee pollen quality due to missing data of its chemical composition in many countries. The aim of our study was to determine the chemical composition of bee pollen from Slovenia. Fresh bee pollen samples (n=52), collected in different seasons from different Slovenian regions were obtained from beekeepers. Prior analyses bee pollen samples were ground and botanical identification was performed. In bee pollen samples contents of water, protein, fat, dietary fibre, ash (AOAC Methods), amino acids (Amino acid Analyzer) and elements (EDXRF Spectrometry) were determined, while the total carbohydrates and energy value were calculated. Botanical identification showed that 35 samples were of polyfloral and 17 samples were of monofloral origin. Significant differences between polyfloral and monofloral bee pollen were confirmed in content of protein, fat and insoluble dietary fibre as well as between individual essential and nonessential amino acids, content of total amino acids and some elements. Our data were than compared and were found to be consistent with international proposition for bee pollen quality standards used in human nutrition regardless to bee pollen origin. Presented data also serves as an indication of nutritional quality of Slovenian bee pollen.

**Key words:** bee pollen, botanical identification, chemical composition, nutritional value