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Chemical composition of Hungarian and foreign apicultural products

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Owing to its favourable nutritional effects and pleasant organoleptic properties, honey is a widely consumed foodstuff. Beyond honey, other important apicultural products like bee pollen, royal jelly and propolis possess valuable chemical composition. In recent years, the consumption of bee pollen is increasing, mainly among health-conscious customers. Although the investigation of honeys is a very popular theme, few information is available about the chemical characteristics of bee pollen. In this research work, some physical and chemical properties of Hungarian and foreign apicultural products were examined. Among the Hungarian honeys were acacia, linden, chestnut, honeydew, goldenrod, rapeseed, phacelia, wild and mixed flower honeys. The foreign honeys (thyme, wild lavender, coriander, buckwheat, redwood, coffee blossom, orange blossom and mixed flower) derived from Europe, America and Africa. The provenance of the bee pollen samples was Europe. The measurements performed were the analysis of colour, acidity, pH, dry matter, reducing sugar, amino acid and HMF content in honeys and colour, ash, crude protein, lipid and moisture content in bee pollen samples. Significant differences were observable and measurable among the honey samples in point of the physical properties: their colour have ranged from pale yellow to dark brown. This diversity was observable in some chemical characteristics like HMF content and reducing sugars as well, while the pH of the samples were quite similar. The pollen samples were characterized with low ash and moisture content and relatively high protein and sugar content. Similarly to honeys, a large diversity was measured among their colour properties. The investigations of apicultural products will continue with the measurement of honeys from additional plant sources and pollens from different provenances and botanical origins. Another important topic of this research work will be the risk assessment of bee pollen.