

Fatty acids were identified in monofloral beebread (BB) and bee pollen (BP) loads collected from *Trifolium pratense* L. A gas chromatography method was used to identify and quantify fatty acids: Thirty-five fatty acids were identified in BB and 42 in BP. A high amount of the healthy n-3 fatty acids was found. The ratio of polyunsaturated fatty acids n-3 to n-6 reached a value of 8.42 and 3.35 in the latter products. The proteomic analysis also was performed on the manually collected *T. pratense* pollen, and the most abundant protein groups were subjected to mass spectrometry analysis. Proteins identified in *T. pratense* pollen are involved in the main cellular functions (cell membrane formation, organelles traffic, and mainly metabolic processes). Because of the composition of fatty acids in BB and BP and a variety of proteins present in pollen, these products are considered to be favorable for human nutrition and health.

*Trifolium pratense* pollen protein 2DE analysis.