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EFFECT OF TEMPERATURE ON DRYING BEE POLLEN AND THEIR ANTIOXIDANT ACTIVITY

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The aim of the research was to determine the effect of different temperatures on the bee pollen drying and their antioxidant activity. In the experiment, were investigated monofloral pollen samples from 8 plant species: *Robinia pseudoacacia* L., *Trifolium repens* L., *Phacelia tanacetifolia* L., *Tilia* spp., *Papaver somniferum* L., *Fagopyrum esculentum* Moench, *Brasssica napus* L., *Helianthus annuus* L., *Salix alba* L. received from beekeepers. Bee pollen samples were dried in laboratory furnace at the temperatures 40℃, 60℃ and 80℃, respectively, for 20 minutes. After drying, the antioxidant activity was determined by water and methanol extracts using the DPPH method. In all species, were identified high antioxidant activities in methanolic extracts when compared with the aqueous extract. Increase of temperature during the dryingprocess progressively decreased the antioxidant activity of bee pollen. This trend has not been the same for all species. Low level of analyzed index was defined in *Trifolium repens* L. methanolic extract in the range of 94.6% (40°) to 90.8% (80°), in aqueous extracts – of the range of 30.4% (40°) to 23.7 (80°). Very low level was defined in *Papaver somniferum* L. methanol extracts in the range of 70.3% (40°) to 55.5% (80°), in aqueous extracts – of the range of 43.7% (40°) to 27.4 (80°). Conclusion. Bee pollen is recommended to be dried up to 40℃.

Keywords: Bee pollen, effect, temperature, drying, antioxidant activity

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