(BP-P-7) Effect of Heat in the Bioactive Properties of Bee Pollen

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Bee pollen in flower pollen collected by the honey bee, *Apis mellifera*, for the purpose of feeding its larvae in the early stages of development. It is recognized to be a valuable apitherapeutic product with potential for medical, health and nutritional applications. The objective of this work was to compare the effect of different storage conditions in the bioactive compounds and biological properties of bee pollen. The amount in phenolics compounds determined by the method of *Folin-Ciocalteu* varied from 32.64 to 48.40 mg GAE/g, for the dehydrated and refrigerated samples, respectively. Significant differences were verified among the two conservation processes. Concerning the amount of total flavonoids determined by the method of aluminum chloride were not significant differences between the dehydrated (6.58 mg of DEA/g) and refrigerated samples (CAE 6.99 mg/g). The concentration-dependent antioxidative capacity was verified in DPPH and reducing power assays. Low values of EC50 on DPPH scavenging assay were obtained for fresh and dehydrated samples 0.74 and 1.16 mg/mL, respectively. For reducing power the values obtained for the refrigerated samples and dehydrated were similar. The high activity of refrigerated samples could be related with the conservation process. Regarding to phenolics compounds determined by HPLC method, were identified four (4) families, flavones being the most abundant one in the refrigerated and dehydrated samples. We also verified that the presence of pollen differentially affected the growth of bacterium Gram-positive (*Staphylococcus xylosus*, *Staphylococcus epidermidis*), Gram-negative (*Shigella spp*, *Klebsiella pneumoniae*) and yeasts (*Candida parapilosis*, *Candida menbranifaciens*, *Candida gllabrata*) under study, depending this on the microorganism and the method of BP conservation.

Key words: bee pollen, storage, antioxidative capacity

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