

**Total protein Content of Pollen from Hives of *Apis mellifera* from the Backlands, Semi-arid and Coastline from the State of Alagoas**

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Among other nutrients, the bee pollen is a food rich in protein. However, its composition varies geographically and seasonally as the available flora preferred by bees. Methods to quantify the total protein content (T<sub>protC</sub>) of crude extracts may over or understate the results, due to the many interferences that may be present. This study aimed to test the method of acid precipitation combined with chloroform:methanol system for extraction of proteins in samples of *Apis mellifera* pollen from the coast, semi-arid and backlands of Alagoas, collected at the drought season, for their subsequent quantitative and qualitative analysis. Samples of bee pollen (0.5 g) were macerated in deionized water (10 mL), centrifuged (3800 g, 3 min, 4 °C) and filtered through a filter paper (Whatman 5), for removal of sediment. The filtrate was acidified (HCl) until pH 2, refrigerated (6 ± 2 °C) for 18 h and centrifuged (3800 G, 15 min, 25 °C). The supernatant was discarded, and the precipitate was added of 7.5 mL of chloroform:methanol (2:1 v:v). This was shaken (200 rpm, 15 min), centrifuged as the filtered, and the final supernatant was diluted (1:1 v:v) in the same solvents. The T<sub>protC</sub> was determined by the Lowry's test. Aliquots (10 µL) of these material, as well as from standard bovine serum albumin (100 µg.mL<sup>-1</sup>), were also subjected to thin-layer chromatography (TLC), developed in chloroform:methanol: water (65:24:4 v:v:v), for revealing with 7.5% solution of ninhydrin. Samples of bee pollen from backlands of Alagoas showed higher T<sub>protC</sub> compared with those from other regions of the State, despite the lack of diversity of pollinic flora on the drought. The protein profile (TLC) was similar for all the samples, although those from backlands have bands with higher areas.

Keywords: bee pollen, total protein content

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