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Fatty Acid Composition and Therapeutic Effects of Beebread

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Abstract : Palynological spectrum, proximate and fatty acids composition of eight beebread samples obtained from different geographical origins were determined. Beebread moisture contents varied between 11.4-15.9 %, ash 1.9-2.54 %, fat 5.9-11.5 %, and protein between 14.8-24.3 %. To our knowledge, this is the first study investigating fatty acids (FAs) composition of the selected monofloral beebreads. A total of thirty-seven FAs were identified. Of these (9Z, 12Z, 15Z)-octadeca-9, 12, 15-trienoic acid, (9Z, 12Z)-octadeca-9, 12-dienoic acid, hexadecanoic acid, (Z)-octadec-9-enoic acid, (Z)-icos-11-enoic acid and octadecanoic acid were the most abundant in all the samples. Cotton beebread contained the highest level of ω-3 FAs, 41.3 %. Unsaturated/saturated FAs ratios ranged between 1.38 and 2.39 indicating that beebread is a good source of unsaturated FAs. The pollen, proximate and FAs composition of beebread samples of different botanical and geographical origins varied significantly.

Keywords : bee bread, fatty acid composition, proximate composition, pollen analysis
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