CHEMICAL CHARACTERIZATION OF CHILEAN NATIVE MONOFLORAL BEE HONEY EXTRACTS BY CAPILLARY ELECTROPHORESIS

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Chile produces several kind of honey owing to the presence of a great endemic native flora. Those bee products have important biological properties inherited from specific floral sources. In the last years, the detection of certain chemicals compounds has allowed to certify the origin of honey and other beehive products. One group of those chemicals is the family of phenolics compounds. Those molecules are involved in the natural capabilities and they are useful as bio markers, because they are originated as products of the secondary metabolism of melliferous plants responsible of the botanical origin of honey.

Ethanolic extracts of unifloral honey and nectar of Quillaja saponaria and honey sac from bees were analyzed by capillary electrophoresis, in order to identify any phenolic compound with potential use as chemical marker. The analyses showed that ferulic and p-coumaric acids may be used as markers due to their presence in all the extracts studied by CE. A third compound identified as caffeic acid, was detected only in two analyzed extracts (honey and honey sac bee). This result suggests that bee by itself is capable to modify the initial content of nectar and therefore the final composition of phenolics in honey.

In this work, we discuss the phenolic compounds profiles obtained for each studied extract for establishing a “fingerprint” of those molecules in these beehive products.

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