

Identification of phenolic compounds by HPLC-ESI-MS/MS and antioxidant activity from Chilean propolis

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© 2014. Propolis is a complex hive product produced by honey bees, *Apis mellifera*. Its composition and biological activities depend on the vegetation where hives are placed. Propolis is often used as a food supplement. The aim of this research is to determine the antioxidant properties in vitro and the phenolic composition of six propolis collected from the region of Santiago of Chile. We obtained the ethanolic extracts dry and wax free (EEPs) and studied their antioxidant properties by FRAP, ORAC-FL, ORAC-PGR and DPPH radical methods. The total phenols were quantified by a spectrophotometric method and 30 phenolic compounds were identified by HPLC-ESI-MS/MS analysis. Curacaví EEP has the highest relative abundance of caffeic acid phenylethyl ester (CAPE) while Buin EEP has the highest relative abundance of caffeic acid benzyl ester and quercetin. Both have the highest antioxidant activity in vitro in all methods used. Our research shows, for the first time, a comparative analysis of th