

ANTIOXIDANT ACTIVITY AND PREVENTION OF UV-INDUCED OXIDATIVE STRESS ON SKIN BY BRAZILIAN PROPOLIS

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It has been reported that orally and topically administered natural antioxidants, provide protection against UV radiation. Then, natural extracts, such as propolis, which present in their chemical composition a high amount of flavonoids and polyphenols, could be utilized as raw materials to be applied as topical antioxidants. Thus, the purpose of this work was to evaluate antioxidant activity against different free radicals of two Brazilian propolis extracts (GPE- green propolis extract and BPE- brown propolis extract), and also their *in vivo* functional activity by the GSH assay. Both extracts presented antioxidant activity in a dose dependent manner for the methods evaluated, showing to be effective in scavenging several ROS (reactive oxygen species). However, it was observed that the GPE showed higher antioxidant activity than the BPE when the IC₅₀ (concentration that caused 50% inhibition) values were compared. Moreover, the pretreatment of UV irradiated animals with the solutions containing both propolis extracts caused approximately 20% recovery in the depleted GSH levels. These results give good perspectives for the topical application of BPE and GPE to prevent and/or treat UV-damaged skin.

Key Words: propolis, GSH, free radical and UV radiation.

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