



Determination of Antioxidant activity and quantification of total phenols *Tribulus terrestris* L.

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Purpose of study: The antioxidant activity is observed in scavenging free radicals, which, in excess, are associated with cancer, cardiovascular disease, cataracts, immune system decline and brain dysfunction. Alternative and / or complementary therapies are being studied and evaluated, and among them there are the herbal preparations, called herbal medicines. This study aimed to evaluate the antioxidant potential *Tribulus terrestris* dry extract through in vitro tests.

Methods: Antioxidant activity was determined for DPPH radical scavenging activity¹ and by inhibition the oxidative hemolysis induced aqueous peroxy radicals [2,2'-azobis (2-amidinopropane) dihydrochloride (AAPH)] of human erythrocytes^{2,3}. Total phenolic contents of *T. terrestris* dry extract samples were determined by the Folin-Ciocalteu method⁴ and results expressed in µg of gallic acid equivalent (AGE). Tests were performed in triplicate at concentrations of 250, 500, 1000 and 2000µg / ml.

Results: Antioxidant evaluation to the concentration of 10mg / mL dry extract of *T. terrestris* showed higher activity (75.96%) among the evaluated concentrations, for DPPH test. The hemolysis inhibition assay, the concentration of 1mg / ml showed (7.86% hemolysis) in the sixth hour reading. The determination of total phenols for the concentration 10mg / mL of dry extract was 220.58 ug of AGE.

Conclusion: *T. terrestris* valued dry extract showed potential for their use in antioxidant formulations. The evaluated activity can be correlated to the polyphenols found and quantified in the extract.

References

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