World Academy of Science, Engineering and Technology
International Journal of Pharmacological and Pharmaceutical Sciences
Vol:8, No:11, 2014

Antioxidant Activity and Total Phenolic Content within the Aerial Parts of Artemisia absinthium

Authors : Hallal Nouria, Kharoubi Omar

Abstract : Wormwood (Artemisia absinthium L.) is a medicinal and aromatic bitter herb, which has been used as a medicine from ancient times. It has traditionally been used as anthelmintic, choleretic, antiseptic, balsamic, depurative, digestive, diuretic, emmenagogue and in treating leukemia and sclerosis. The species was cited to be used externally as cataplasm of crushed leaves for snake and scorpion bites or decoction for wounds and sores applied locally as antiseptic and antifungal. Wormwood extract have high contents of total phenolic compounds and total flavonoids indicating that these compounds contribute to antiradical and antioxidative activity. Most of the degenerative diseases are caused by free radicals. Antioxidants are the agents responsible for scavenging free radicals. The aim of present study was to evaluate the phytochemical and in vitro antioxidant properties of Wormwood extract. DPPH assay and reducing power assay were the method adopted to study antioxidant potentials of extracts. Standard methods were used to screen preliminary phytochemistry and quantitative analysis of tannin, phenolics and flavanoids. Aqueous and alcoholic extracts were showed good antioxidant effect with IC50 ranges from 62 µg/ml for aqueous and 116µg/ml for alcoholic extracts. Phenolic compounds, tannins and flavonoids were the major phytochemicals present in both the extracts. Percentage of inhibition increased with the increased concentration of extracts. The aqueous and alcoholic extract yielded 20, 15& 3, 59 mg/g gallic acid equivalent phenolic content 2, 78 & 1,83 mg/g quercetin equivalent flavonoid and 2, 34 & 6, 40 g tannic acid equivalent tannins respectively. The aqueous and methanol extracts of the aerial parts showed a positive correlation between the total phenolic content and the antioxidant activity measured in the plant samples. The present study provides evidence that both extracts of Artemisia absinthium is a potential source of natural antioxidant.

Keywords : pharmaceutical industries, medicinal and aromatic plant, antioxidants, phenolic compounds, Artemisia absinthium
Conference Title : ICPPNP 2014 : International Conference on Pharmacognosy, Phytochemistry and Natural Products
Conference Location : Istanbul, Türkiye
Conference Dates : November 28-29, 2014