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HPLC ANALYSIS OF PHENOLIC COMPOUNDS AND ANTIOXIDANT ACTIVITY OF ETHANOLIC EXTRACT OF SEA BUCKTHORN LEAVES

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Introduction

Sea buckthorn is a species belonging to Elaeagnaceae family endemic to the cold-temperate regions and known as a rich source of well-health promoting compounds such as essential fatty acids and phenolic compounds with high potent such as antioxidant properties by donating hydrogens, quenching singlet oxygen and reducing agents.

Aims

This study intends to determine the phenolic compounds content, antioxidant properties of ethanolic extracts from sea buckthorn leaves collected in the north-center of Algeria (TIPAZA).

Materials & Methods

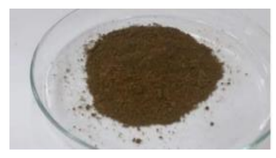
Sea buckthorn leaves were used in the current study. The leaves were collected during harvesting from Tipaza in the north-center of Algeria. After collection, ethanolic extract was prepared . The chemical profile was determined with HPLC (High performance Liquid Chromatography) system Young Linn (YL-clarity 9100 and UV-Vis detector equipped with universal injector method. Diphenyl-picrylhydrazyl (DPPH) radical degradation method was used to estimate the antioxidant activity following "Antioxidant activity was

Experimental design

Sea Buckthorn leaves

Sea buckthorn fruits

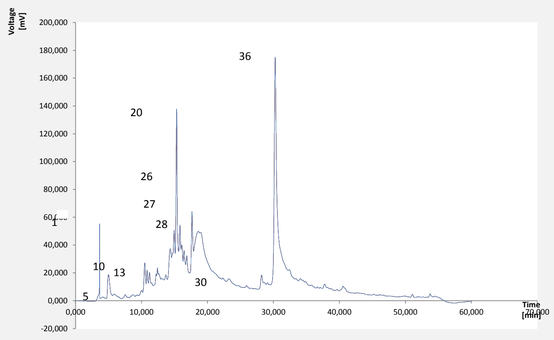
Sea buckthorn fruits



frSea buckthorn powder

Results and Discussion

Ten compounds were identified in ethanolic extracts prepared from sea buckthorn leaves using high-performance liquid chromatography analysis. The results of the chemical profile revealed the identification of ascorbic acid, gallic acid, tannic acid, vanillin, caffein, myricetin, coumarin, epicatechin, kaempferol and catechin.



Conclusion

Antioxidant properties of the ethanolic leaves extracts were confirmed by the in vitro DPPH assay. Ten phenolic compounds were found, including benzopyrones, flavanol flavanols and phenolic acids. Thus, it can be suggested that sea buckthorn extract leaves could have interesting food, therapeutic and cosmetic applications.

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