

ASSESSMENT ANTIOXIDANT ACTIVITIES AND ISOLATION PHENOLIC COMPOUNDS OF CUPRESSUS SEMPERVIRENS EXTRACTS

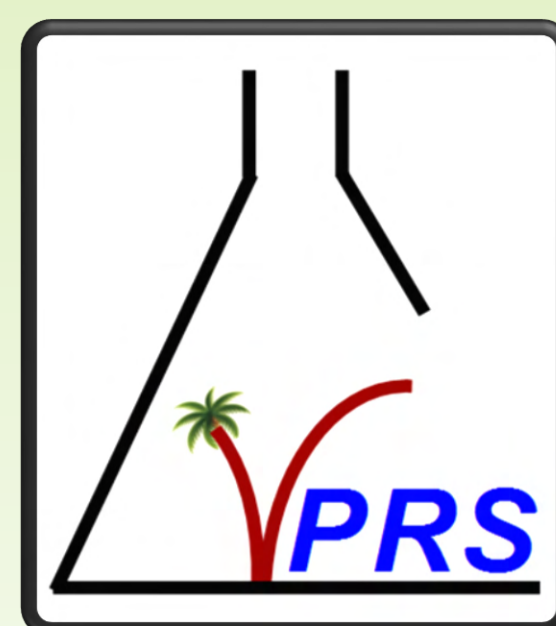
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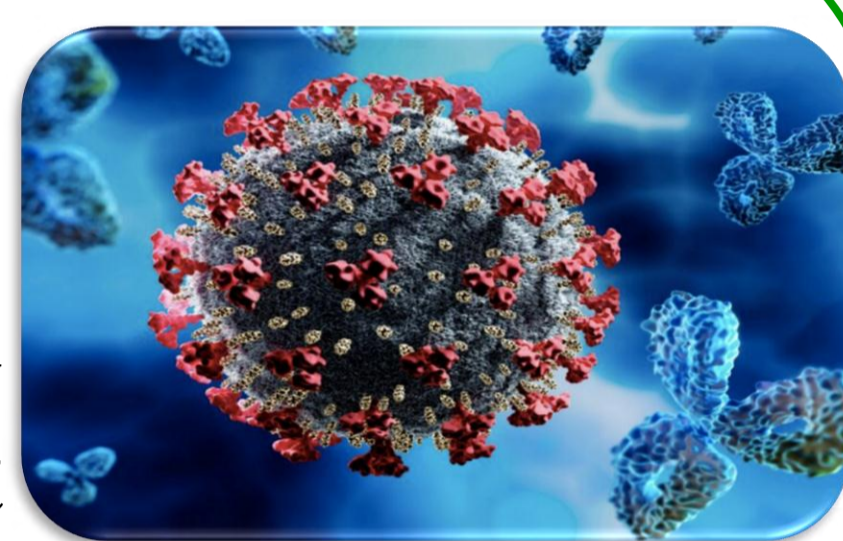
Abstract

Cupressus sempervirens (*Cupressaceae*) is a medicinal and an aromatic plant its leaves and cones have been used as a traditional treatment. The main objective of this study is assessed radical scavenging capacity of *Cupressus sempervirens* extracts; extraction and isolation phenolic compounds from ethyl acetate, butanol fractions. All extracts exhibited a significant high radical scavenging activity where the values percentages of inhibition of superoxide anion (chemical method) ranged between (71.47 ± 0.45 and 18.577 ± 0.792 I %), whereas in cyclic voltammetry method the values of IC50 ranged between (0.136 and 2.130 mg/ml). Chromatogram is revealed by spraying it with 0.5% (w/v) vanillin solution prepared in 4% (w/v) HCl, the spot of tannin appears with Crimson color and the spot of flavonoid appears with yellow color.

Keywords: *C.sempervirens*; chromatography; electrochemical; superoxide; radical

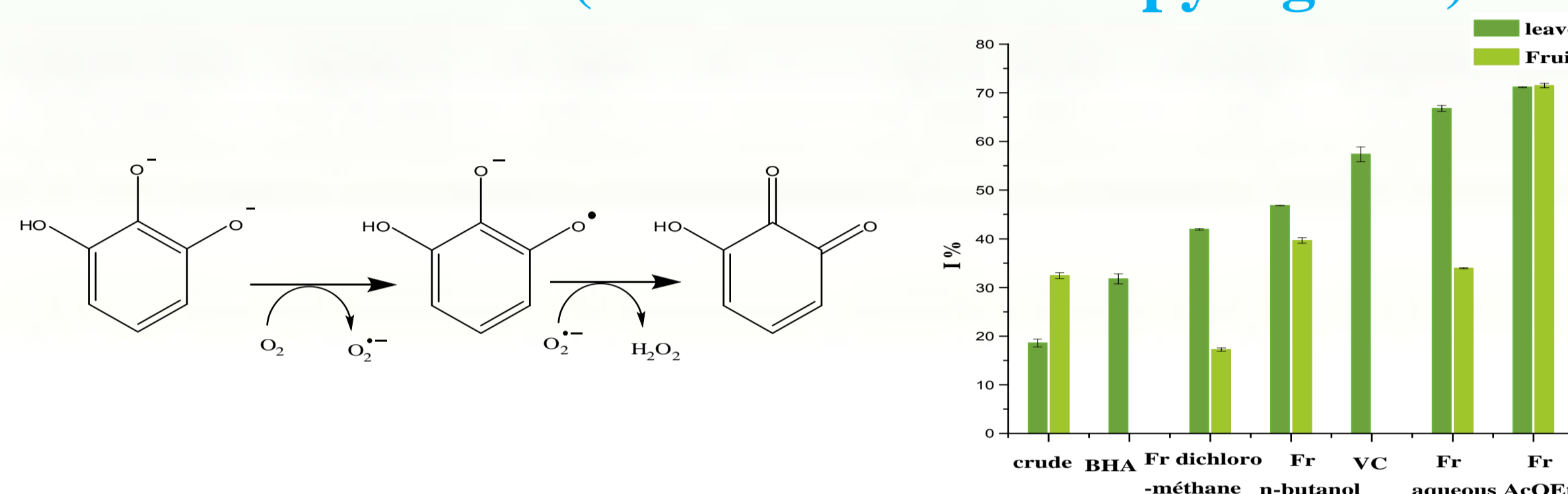
Introduction

Cupressus sempervirens is popularly known as "sarwel"; its dry leaves are used to treat stomach pain as well as to treat diabetes. Previous pharmacological studies have shown that the extract of *Cupressus sempervirens* had virucidal activity against the *corona virus* [1] . and its essential oils were evaluated for their inhibitory activity against SARS-CoV and HSV-1.[2,3]

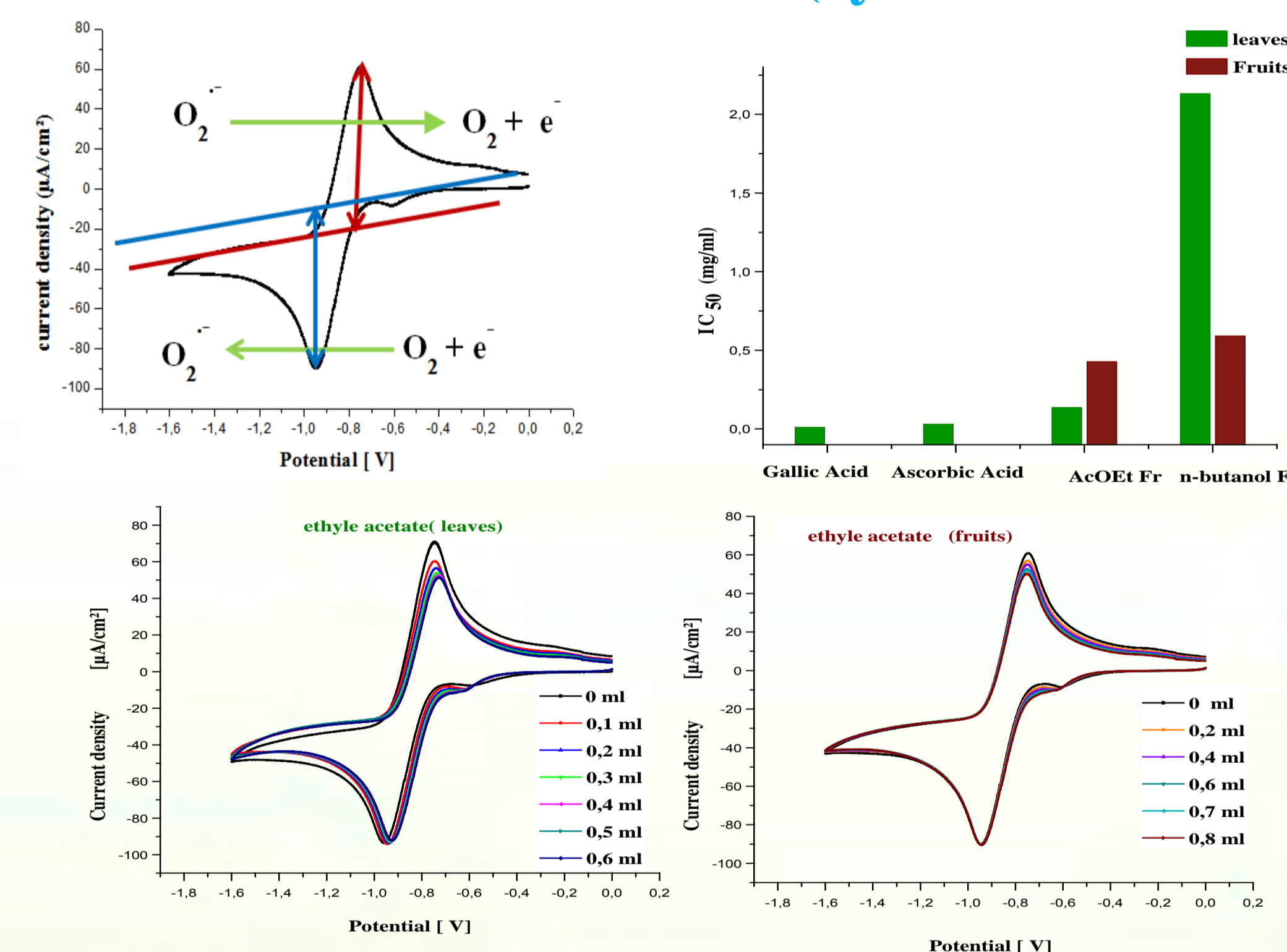


Results

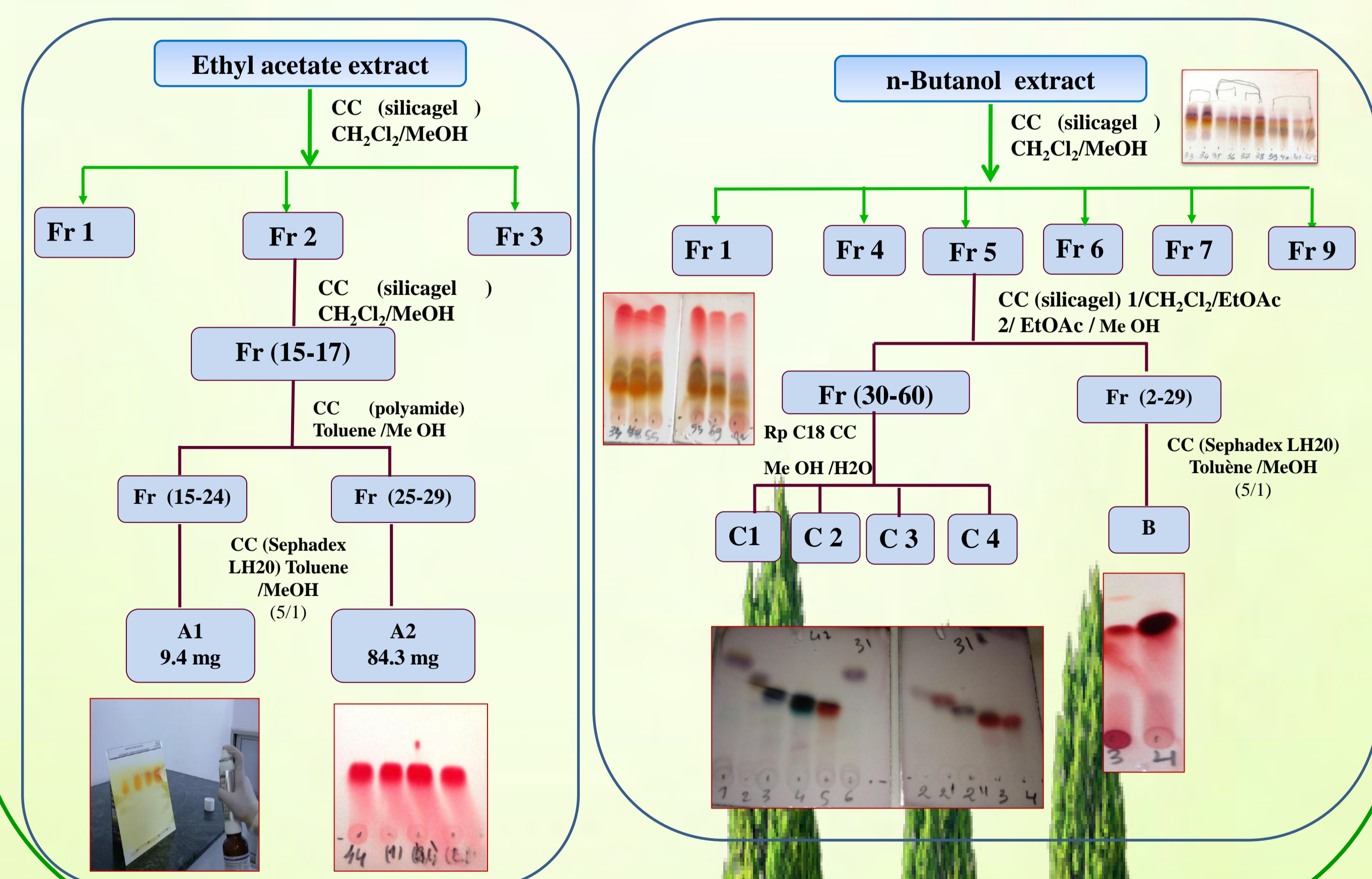
1/ Inhibition of superoxide anion a/ Chemical method (Auto-oxidation of pyrogallol)



b/ Electrochemical method (cyclic voltammetry)



2/ Isolation of phenolic compounds



Methods

Leaves and fruits of *C. sempervirens*

Plant Extraction

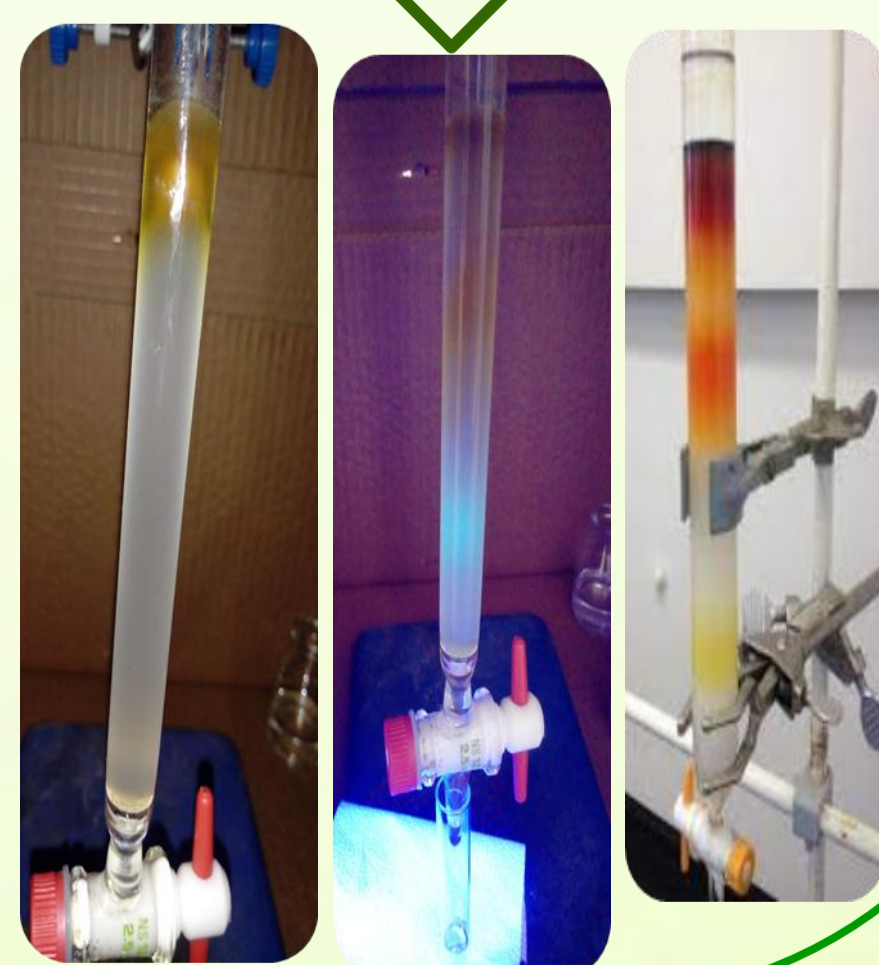
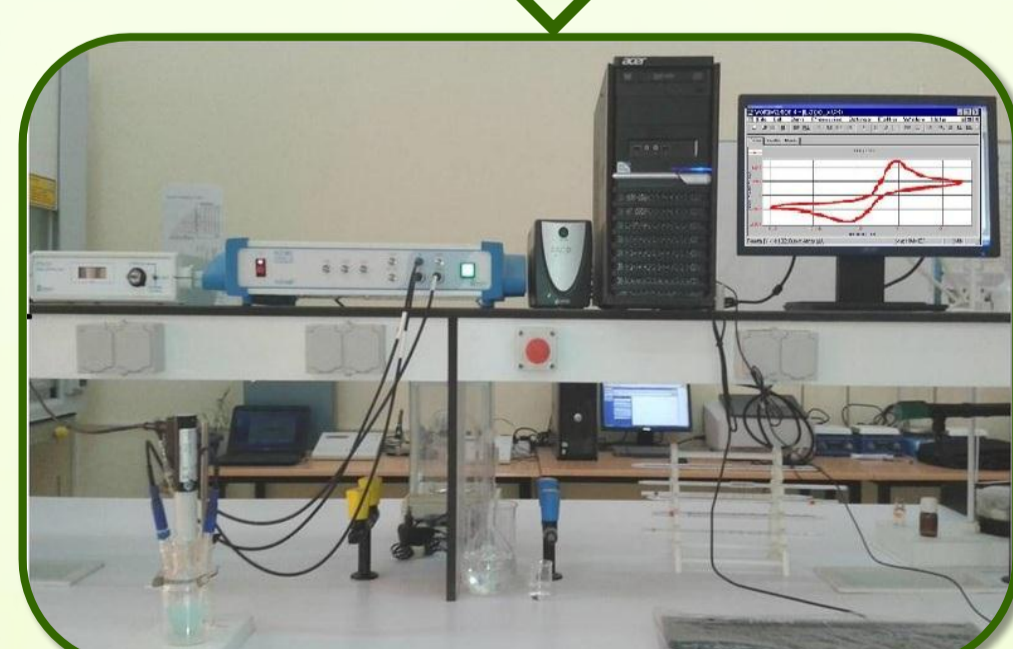
Ethyl acetate, butanol fractions

Radical scavenging capacity

Isolation of phenolic compounds by chromatographic methods

Chemical method

Electrochemical method



Conclusion

These results showed that *C. sempervirens* extracts have potent radical scavenging, where the ethyl acetate fraction of leaves and cones recorded the greatest radical scavenging activity whether in chemical and electrochemical methods. Therefore, it can be regarded as promising candidates for natural plant sources of antioxidants with high value.

References

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