ABSTRACT

Carissa opaca is a small evergreen shrub containing aromatic white flowers and numerous thorns belongs to the Apocynaceae family. It has been used for medicine as well as food items.

Four fractions CO1, CO2, CO3 and CO4 were extracted from dried and grinded leaves of plant by using solvents of different polarities (petroleum ether, chloroform, acetone and methanol) through solvent extraction with the help of Soxhlet apparatus.

In this study the fractions obtained were subjected to measurement of antioxidant activity by using thiocyanate method and scavenging of DPPH (2,2-diphenyl-1-picrylhydrazyl) radical respectively. Alpha tocopherol was used for standard reference. The peroxide value was determined by taking the absorbance of the coloured solution with spectrophotometer. It was found that all the fractions were active but fractions CO3 and CO4 showed comparable antioxidant activity with α-tocopherol and can be used as natural antioxidants.

Phytochemical analysis of these fractions indicated the presence of major phytocompounds including alkaloids, terpenoids, flavonoids, tannins and saponins. A fair correlation between antioxidant/free radical scavenging activity and phytochemical contents was observed.

Antimicrobial activity of all the four fractions was determined by using different strains of bacteria. Method used to study the antimicrobial activity was cavity method or well method. The sensitivity of each organism against each fraction was determined. It was found that zone of inhibition of each fraction was different against each organism showing their extent of activity.

This preliminary study shows that Carissa opaca is an important plant for both medicinal and food point of view.