



## Antioxidant activity and chemical composition of *Cordia curassavica* essential oil collected in Santander - Colombia

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*Cordia curassavica* is a shrub of the Boraginaceae family, native of tropical and subtropical America. It is geographically distributed from Southern Mexico to Northern South America, although it behaves as an invasive weed in Malaysia and Christmas Island (1). *C. curassavica* has ovoid leaves with short, thin hair, white or greenish flowers, with red fleshy fruits and is commonly used in folk medicine for its anti-inflammatory properties. Plant materials were collected in the surroundings of Girón, Santander department. Taxonomical identification of the botanical sample was performed at the Colombian National Herbarium, where voucher specimens were deposited (COL 559446). Leaves and stems of the shrub were subjected to microwave-assisted hydrodistillation to afford the essential oil, 0.2 % by weight. Essential oil characterization was carried out by gas chromatography coupled to mass spectrometry. Two columns with different stationary phases were used: polar and non-polar. Individual components were tentatively identified by matching their mass spectra (EI, 70 eV) with those of spectral libraries (ADAMS, NIST, Wiley) and by comparing their linear retention indices with those reported in the scientific literature. The major components found in *C. curassavica* essential oil were:  $\alpha$ -copaene (16.5 %), *trans*- $\beta$ -caryophyllene (21 %), and germacrene D (18 %). The components found in essential oil, but *trans*-caryophyllene, differ from those found in essential oil obtained from Brazil-cultivated plants (2), where  $\alpha$ -pinene appears as the main compound (22.7 %). The antioxidant activity, determined by the ORAC method, showed that *C. curassavica* essential oil antioxidant capacity exceeded those of reference antioxidants, BHT and  $\alpha$ -tocopherol.

1. Fowler et al. Proceedings of the X International Symposium on Biological Control of Weeds. 2000, 3-14.
2. Carvalho, J.R.P.M. et al. J. Ethnopharmacol., 2004, **95**, 297-301.

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