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Baccharis oxyodonta EXTRACTS: ANTIRADICAL CAPACITY AND PHENOLIC COMPOUNDS

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Abstract: *Baccharis* genus is widespread in tropical areas of South America, and many species are used in folk medicine to treat gastrointestinal and liver disorders, diabetes, anti-inflammatory processes etc. The main compounds identified in this genus are diterpenoids, triterpenoids and flavonoids [1]. The purpose of this study was the evaluation of the antiradical capacity of the partition phases obtained from the methanolic extract of aerial parts of *Baccharis oxyodonta* (Asteraceae), as well as to determine the chemical structure of some constituents isolated from the n-BuOH phase. The aerial parts from *B. oxyodonta* were collected in Campos do Jordão, São Paulo. The dried and powdered vegetal material (242.0 g) was exhaustively extracted with MeOH, yielding 37.44 g of MeOH extract. This extract was dissolved in MeOH:H_2O 1:9 and then partitioned affording the respective phases (hexane – 5.14 g, DCM – 0.20 g, EtOAc – 1.71 g, n-BuOH – 7.66 g, hydroalcoholic – 16.14 g). The antiradical activity of the partition phases was evaluated by DPPH and ABTS methods and expressed using the Trolox® percentage (% Trolox®) parameter [2].

The antiradical capacity of the partition phases of the MeOH extract are presented in table 1. The percentage of trolox is directly proportional to the antiradical activity, so the higher values indicate the higher antiradical activity. Therefore, the n-BuOH phase was the most active one in the DPPH assay, whereas, the AcOEt phase was the most active one in the ABTS assay.

Table 1: Antiradical capacity of partition phases of the MeOH extract from *B. oxyodonta* expressed as % Trolox® values.

Sample	DPPH[a]		ABTS[b]	
	[sample] mg.L^{-1}	% Trolox®	[sample] mg.L^{-1}	% Trolox®
DCM	5.0-25	23.9	5.0-25	22.3
AcOEt	20.0-60	18.9	10.0-20	39.2
n-BuOH	5.0-25.0	33.0	5.0-25	25.9
hydroalcoholic	11.7-31.7	19.9	11.7-31.7	21.2

[a][Trolox®] = 2,5-7,5 mg.L^{-1}; [b][Trolox®] = 1,25-3,75 mg.L^{-1}.

Furthermore, the n-BuOH phase was fractionated in semi preparative CLAE; two of the obtained fractions with high purity (F-10 and F-12) were analyzed by ^{1}H and ^{13}C NMR spectroscopy. The comparison of spectral data with literature revealed the presence of 3,5-dicaffeoylquinic acid and 3,4-dicaffeoylquinic acid respectively [3,4].

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