

ISOLATION AND IDENTIFICATION OF SUBSTANCES FROM *PAEPALANTHUS ACANTOPHYLLUS* CAPITULA

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ABSTRACT

Paepalanthus acantophyllus specie belongs to Eriocaulaceae family, popularly know as “semprevivas”. This family comprising approximately 1.200 species divided into 10 genera [1], with high endemic levels in the Espinhaço Range region. *Paepalanthus* is the largest genus in this family, with approximately 500 species, more than 200 endemic in Brazil. The identification of substances from *P. acantophyllus* were important to assist in the taxonomic classification of the specie in this genus.

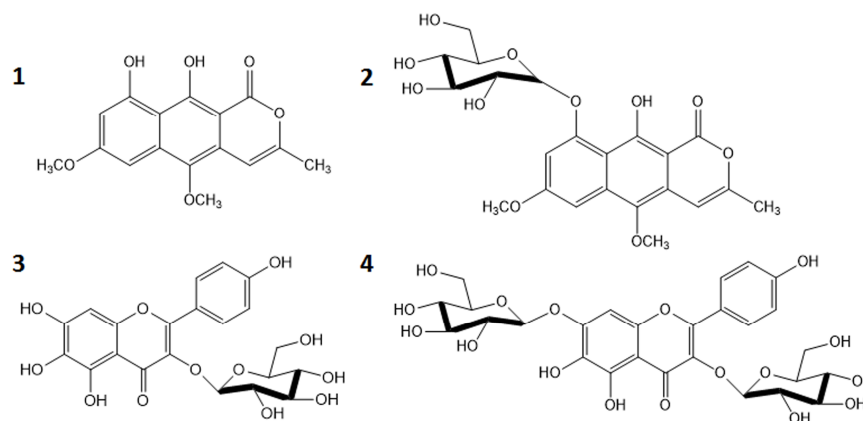
The aim of this study are investigate the chemical of the polar extracts of the aerial parts from *P. Acantophyllus*.

Capitula, scapes and leaves of *P. acantophyllus* were collected in Alto Paraíso-GO in 2012 (Voucher: 33512-3). The aerals parts were separately dried, crushed, and the powder was percolated with methanol to prepare the polar extract.

With the methanolic extract from capitula, it is carried out a fractionation by gel permeation chromatography, yielding 82 fractions were analyzed by TLC. The fractions 37-45 (296 mg) were purified by semipreparative HPLC-PDA, resulting in the isolation of four substances.

The substances were analyzed by mono and two-dimensional NMR, resulting in the identification of the naphthopyranones: paepalantine (**1**) and paepalantine-9-O- β -D-glucopyranoside (**2**), flavonoids: 6-methoxykaempferol-3-O- β -D-glucopyranoside (**3**) and 6-methoxykaempferol-3-7-di-O- β -D-glucopyranoside (**4**).

Figure 1. Isolated and identified substances of the capitula from *P. acantophyllus*.



This study result in the isolation and identification of two flavonoids derived from kaempferol and two naphthopyranones in *P. acantophyllus* capitula. The substance paepalantine-9-O- β -D-glucopyranoside was previously identified in another *Paepalanthus* species [2] is considered a taxonomic marker from the *Paepalanthus* genus.

REFERENCES

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- [2] Zanutto, F. V.; Boldrin, P. K.; Varanda, E. A.; Souza, S. F. S.; Sano, P. T.; Vilegas, W. and Santos, L. C. 2013. Characterization of Flavonoids and Naphthopyranones in Methanol Extracts of *Paepalanthus chiquitensis* Herzog by HPLC-ESI-IT-MSⁿ and Their Mutagenic Activity. *Molecules*. 18: 244-262.