

Fractionation and isolation of flavonoids from the leaves ethanol extract of *Anacardium occidentale* L. (Anacardiaceae).

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Palavras Chave: *Anacardium*, isolation, flavonoids.

Introduction

Anacardium occidentale L. (Anacardiaceae), is popularly known as "cashew". The fruits, stem bark and leaves extracts have been traditionally used for the treatment of dyspepsia, asthma, diabetes, mouth and peptic ulcers, intestinal disorders, sore throat, bronchitis, and inflammatory diseases. Several pharmacological properties from different parts of *A. occidentale* validate its folkloric use in diverse alternative medicine practices¹. Additionally, the National List of Plants of Interest to the SUS includes *A. occidentale*². We now describe the isolation and structural identification of flavonoids from the ethanol extract of *A. occidentale*, which could be selected as chemical markers for the quality control of herbal medicines.

Results and Discussion

The leaves of *A. occidentale* were extracted with EtOH. Then, 10.45 g of the crude extract was dissolved in CH₃OH:H₂O (2:8, v/v) and submitted to liquid-liquid partition with various solvents. The EtOAc fraction (1.36 g) was subjected to a Sephadex LH-20 with CH₃OH as mobile phase. This procedure furnished 146 fractions, which were assembled according to similarity by TLC. Fractions 83-87 (23.8 mg) and 101-113 (28.2 mg) were analyzed by RP-HPLC. The condition used was: linear gradient of CH₃OH:HOAc:H₂O 5%-100% CH₃OH in 30 minutes, 5 minutes 100% CH₃OH and 15 minute of equilibration, ODS column, oven 40 ° C, flow 0.8 ml/min, λ 254 and 220 nm (Figures 1 and 2). Quercetin (**1**, 23.8 mg, R_t 19.61 min) was isolated from fractions 83-87, and agathisflavone (**2**, 28.2 mg, R_t 23.01 min) from fractions 101-113. Compounds **1** and **2** (Figure 3) were identified by ¹H and ¹³C NMR data in comparison to those available in literatura³. Compounds **1** and **2** were previously isolated from *A. occidentale*.

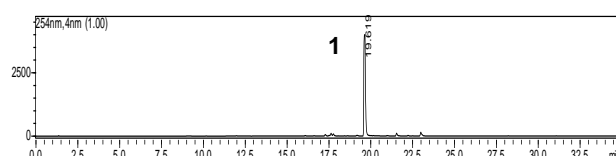


Figura 1. Chromatogram of fraction 83-87.

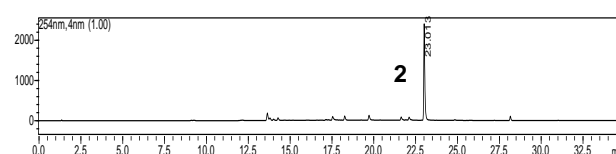


Figura 2. Chromatogram of fraction 101-113.

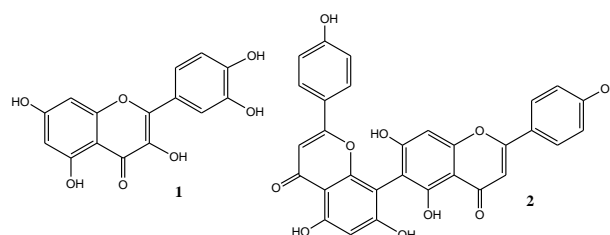


Figure 3. Compounds isolated from *A. occidentale*.

Conclusions

The developed method allowed the isolation and identification of **1** and **2** in EtOAc fraction. These compounds can be used as chemical markers of this species for the development and validation of a method by HPLC-DAD for analysis of extracts.

Acknowledgment

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² Ministério da Saúde. **2009**. Relação de Plantas Medicinais de Interesse ao SUS. http://portal.saude.gov.br/portal/aplicacoes/reportagesEspeciais/default.cfm?pg=dspDetalhes&id_area=124&CO_NOTICIA=10001.

³ Agrawal, P.K. *Carbon-13 NMR of Flavonoids*. **1989**. Elsevier, Amsterdam.