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Comparative chemical profile of fruits, leaves and barks of *Schinus terebinthifolius*

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INTRODUCTION: *Schinus terebinthifolius* (Anacardiaceae) is a plant cultivated in upstate Espírito Santo, in city of São Mateus, for exportation. Its fruits are among the most sophisticated condiments used in Europe cuisine[1], known as pink pepper. Besides the use of the fruits as a condiment, the barks of *S. terebinthifolius* were approved by Anvisa and are in the list of RENAME, of Ministery of Health, like raw material to manufacture of herbal medicine. Therefore, has a great commercial potential. In popular medicine, this species is generally used as analgesic, anti-inflammatory, depurative, febrifuge, and to treat respiratory problems[2]. **OBJECTIVES:** This study aimed to analyze comparatively by GC-MS and (-)-ESI-FT-ICR MS the chemical composition of fruits, leaves and barks. **METHODOLOGY:** Each part of the plant (1g) was triturated with silica gel (1.5g) and the solution added into a glass column. The solid phase dispersed compounds were eluted with dichloromethane and methanol successively. The first fraction was analyzed by GC-MS and the second one by (-)-ESI-FT-ICR MS. **RESULTS AND DISCUSSION**: GC-MS chromatogram showed the presence of monoterpenes, sesquiterpenes, steroids and triterpenes in fruits and leaves and steroids and triterpenes in the barks of *S. terebinthifolius*. On the other hand, mas spectrometry by (-)-ESI-FT-ICR MS showed phenolics (tannins, flavonoids, phenolic acids) and acid triterpenes in all three parts of the plants. However, biflavonoids were found specially in the fruits, while acid triterpenes in the leaves. Tannins were the major compounds in the bark. **FINAL CONSIDERATIONS**: Sample preparation by solid phase dispersion was adequate to isolate the compounds from all the three parts of the plant. Fruits are a rich source of volatile compounds and biflavonoids, while leaves contain several acid triterpenes and their glycosides. Bark is predominantly phenolic.

REFERENCES

[1]SILVA, B. G et al.; Effects of Different Drying Conditions on Key Quality Parameters of Pink Peppercorns (Schinus terebinthifolius Raddi). *Journal of Food Quality*, São Paulo, n. 3152797, August 2017.

[2]EL-MASSRY. K. F.; EL-GHORAB, A. H.; SHAABAN, H. A. et al. Chemical Compositions and Antioxidant/Antimicrobial Activities of Various Sample Prepares from *Schinus terebinthifolius* Leaves Cultivated in Egypt. *Journal of Agricultural and Food Chemistry*, v. 57, p. 5265-5270, jun 24 2009.