Supporting Information

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Volatile constituents of three *Myrsine* L. species from Brazil

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S1: Experimental

Isolation of Essential Oil

The fruits (200g) and the leaves of *M. parvifolia* (500g), the leaves of *M. rubra* (520g) and the leaves of *M. gardneriana* (70g) were individually turbolized with distilled water. Then, each material was placed in a 5 L round bottomed flask and submitted to hydrodistillation during 4 h using a Clevenger type-apparatus. The essential oil yields were calculated on a dry weight basis [1]. Essential oils were dried over anhydrous sodium sulfate and stored at 4°C for further Gas Chromatography (GC-FID) and GC-Mass Spectrometry (GC/MS) analysis.

Essential oil analysis

GC and GC/MS Analysis of Essential Oils: essential oils were analyzed by a GCMSQP5000 (SHIMADZU) gas chromatograph equipped with a mass spectrophotometer using electron ionization. One microliter of each essential oil, dissolved in CH_2Cl_2 (1:100 $mg.\mu L^{-1}$), was individually injected at RTX-5 column (i.d. = 0.25 mm, length 30 m, film thickness = 0.25 μm) [2]. The gas chromatographic (GC) conditions were: carrier gas (Helium), flow rate 1 $mL.min^{-1}$ and split injection with split ratio 1:40 and specific temperature were as follows:

M. parvifolia and *M. gardneriana*: injector temperature, 260 °C; detector temperature, 290 °C. The oven temperature was programmed from 60ºC with a gradual increase of $5ºC.min^{-1}$, to 290ºC at a rate of $5ºC.min^{-1}$. *M. rubra*: injector temperature, 260 °C; detector temperature, 250 °C. The oven temperature was programmed from 60 °C, with an increase of 3 °C min^{-1}, to 240 °C.

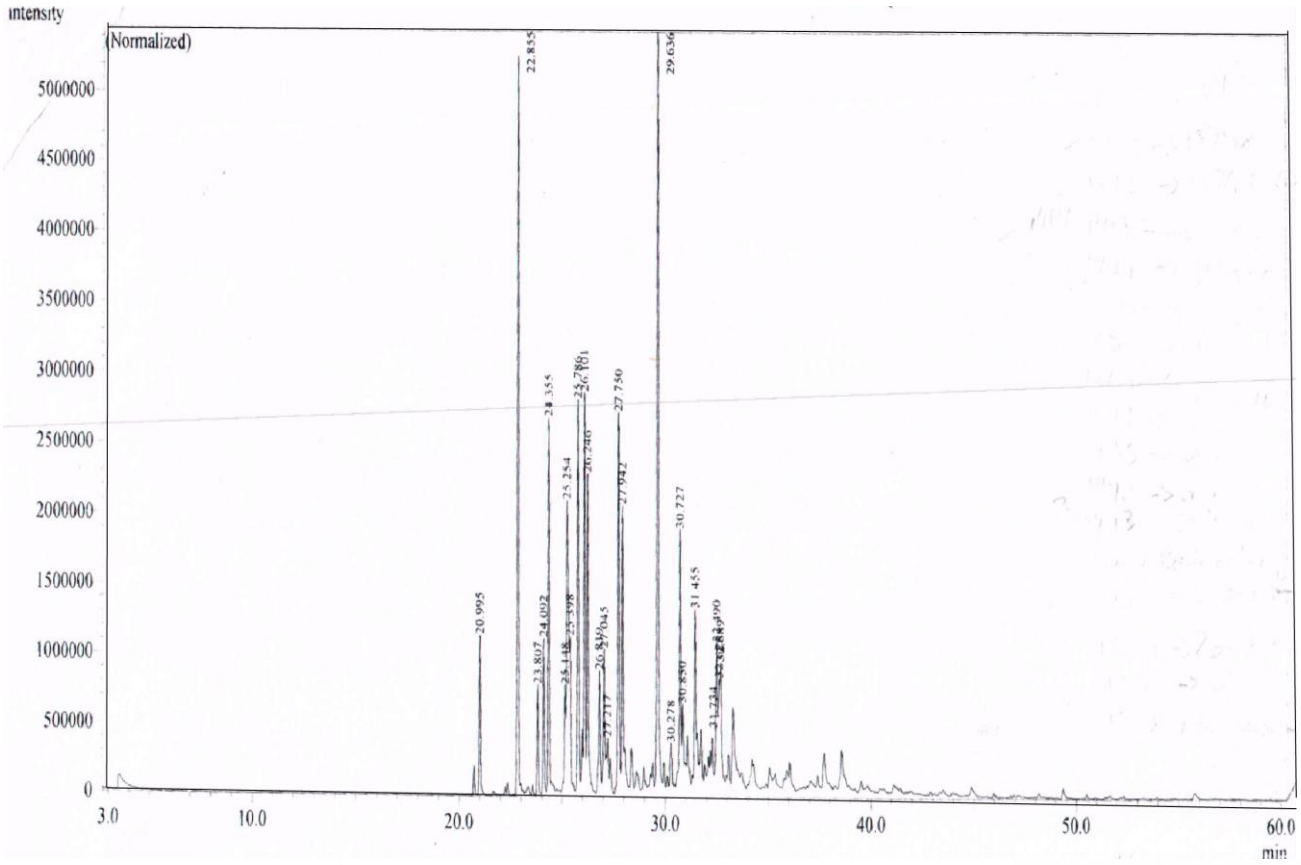
The mass spectrometry (MS) conditions were voltage 70 eV and scan rate 1 scan s^{-1}. The retention indices (RI) were calculated by interpolation to the retention times of a mixture of aliphatic hydrocarbons (C9-C30) analyzed in the same conditions. The identification of the substances was performed by comparison of their retention indices and mass spectra with those reported in literature [3]. The MS fragmentation pattern of compounds was also checked with NIST (National Institute of Standards and Technology) mass spectra libraries. Quantitative analysis of the chemical constituents was performed by flame ionization gas chromatography (GC/FID), under same conditions of GC/MS analysis and percentages obtained by FID peak-area normalization method.

S2: References

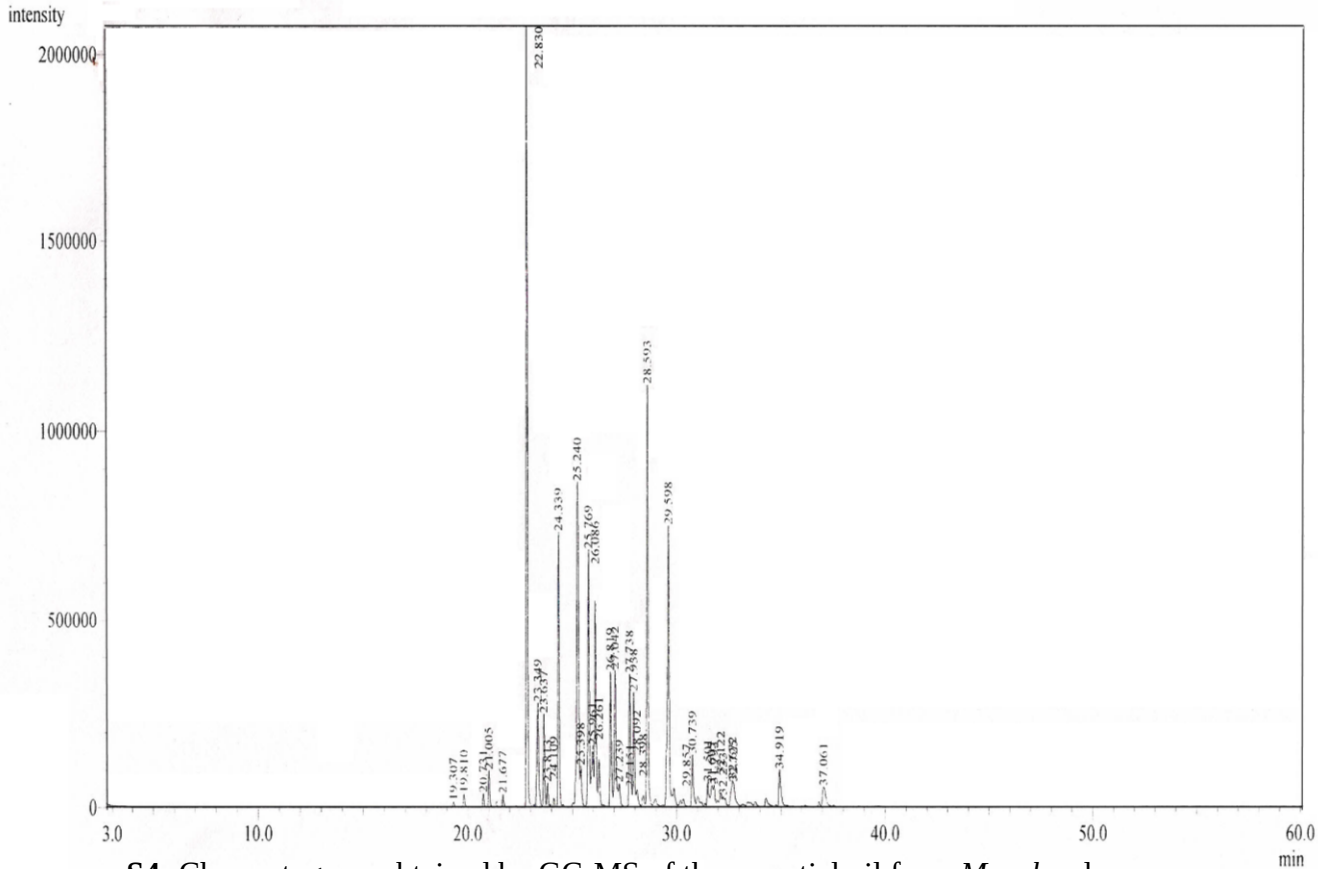
[1] European Pharmacopoeia (2005). Fourth Edition, Council of Europe, Strasburg.

[2] A.P. Oliveira, R.A.S. Cruz, G.S. Botas, M.G. Gonzales, M.G. Santos, L.A. Teixeira and L. Rocha (2010). Chemical and biological investigations of Pilocarpus spicatus essential oils, *Blacpma.* **9**(3), 206-211.

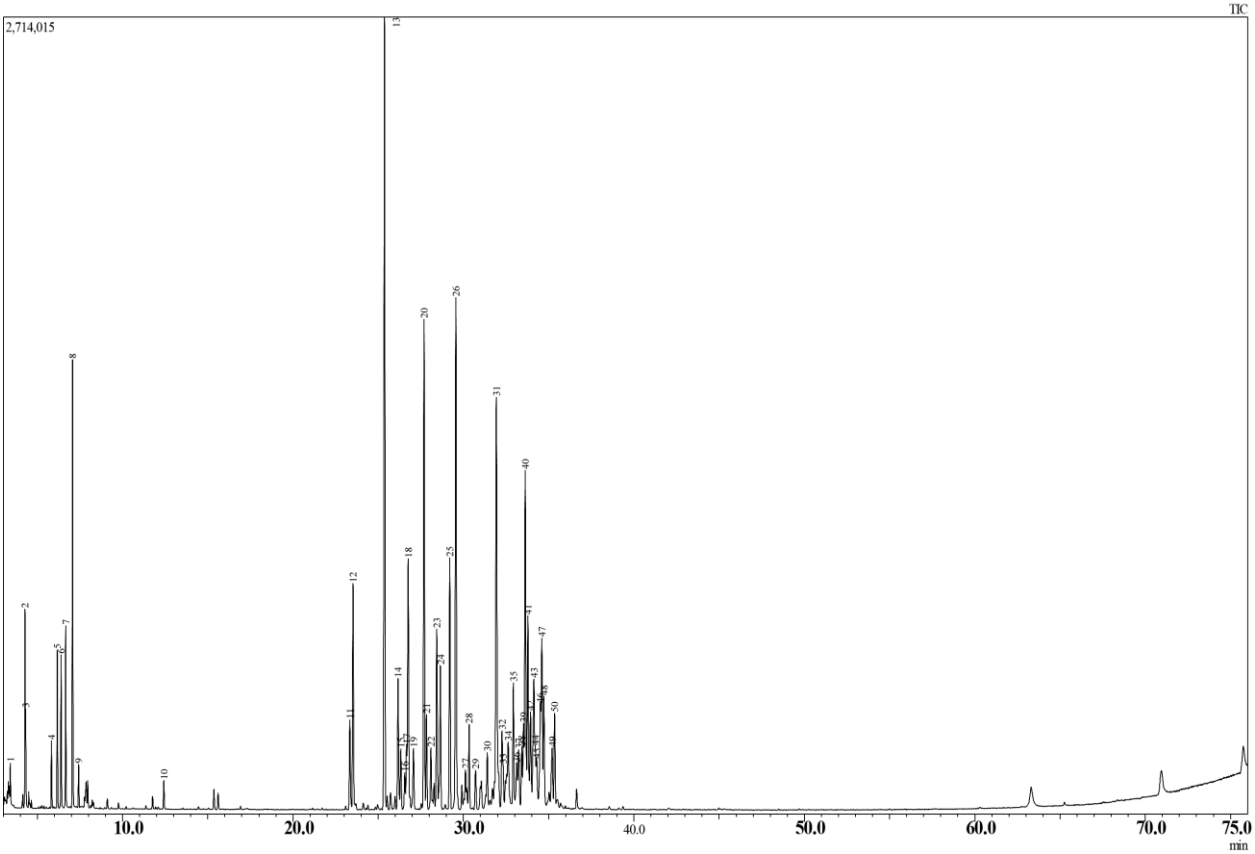
[3] R.P. Adams (2007). Identification of essential oils components by gas chromatography mass spectroscopy. 4th ed. Allured Publishing Corporation, Carol Stream, Illinois.



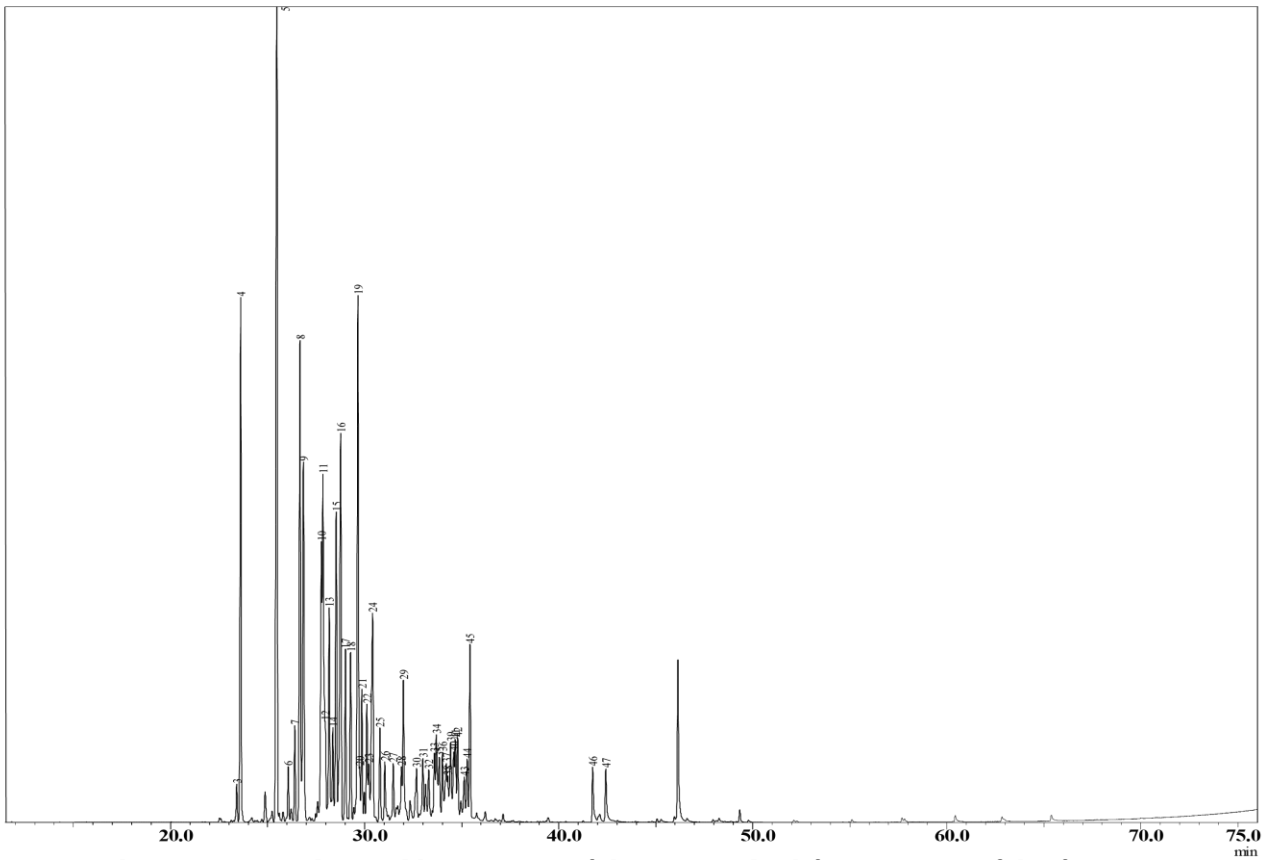
S3: Chromatogram obtained by GC-MS of the essential oil from *M. parvifolia* leaves



S4: Chromatogram obtained by GC-MS of the essential oil from *M. rubra* leaves



S5: Chromatogram obtained by GC-MS of the essential oil from *M. gardineriana* leaves



S6: Chromatogram obtained by GC-MS of the essential oil from *M. parvifolia* fruits