Composition of essential oils from the species *Ardisia humilis* and *Myrsine lineata* (Primulaceae)

Julia V. França[1], Anna Carina A. e Defaveri[2], Bruna Nunes de Luna[3], Humberto R. Bizzo[4], Alice Sato[2]

[1] Universidade Federal do Rio de Janeiro - Rio de Janeiro, Brazil
[2] Universidade Federal do Estado do Rio de Janeiro - Rio de Janeiro, Brazil
[3] Instituto de Pesquisas Jardim Botânico do Rio de Janeiro - Rio de Janeiro, Brazil
[4] Embrapa Food Technology- Rio de Janeiro, Brazil
alicesato@unirio.br

Keywords: Essential oil, Myrsinoideae, *Ardisia humilis*, *Myrsine lineata*.

Atlantic Forest is considered one of the most important tropical forests in the world due to its high level of diversity and endemism. This biome consists of a variety of formations associated with the climatic characteristics of each region. Primulaceae (order Ericales) comprises 2590 species grouped in 58 genera. The genus *Ardisia* is commonly used as ornamentation although it is used in Chinese medicine for different illnesses. The genus *Myrsine* is native and endemic of Brazil. The species belonging to the genus *Myrsine* have been investigated concerning their chemical compounds and activity on human health. Leaves of the species *Ardisia humilis* Vahl. and *Myrsine lineata* (Mez) Imkhan. (Primulaceae) were collected in the Rain Forest Submontane in the state of Rio de Janeiro. A voucher specimen was deposited in the herbarium of Rio de Janeiro Botanic Garden (RB) RBv2091 and RB 605196.About 20g of dried leaves of each species were subjected to hydrodistillation separately in a Clevenger-type apparatus for 3 hours.The oils were analyzed by GC/FID in an Perkin-Elmer Autosystem and GC/MS in an Agilent 6890N and an Agilent 5973N systems, both with HP-5MS fused silica capillary columns (30 m X 0.25 mm X 0.25 µm). Hydrogen was used as carrier gas for GC/FID and helium for GC/MS, both with a flow rate of 1.0 mL/minute. Oven temperature was raised from 60 to 240°C at 3°C/minute. Mass detector was operated in electronic ionization mode at 70eV. The percentage composition was obtained by normalization from FID. Oil components were identified by comparison of mass spectra and linear retention indices with spectral library. About 12 compounds were identified from the essential oils of *A. humilis*, representing 95.6% of the sample. The essential oil from *A. humilis* was characterized by major compounds β-caryophyllene (40.6%), limonene (21.6%) and *trans*-nerolidol (14.2%). The monoterpenes comprised 23.8% of the total sample, all belonging to the hydrocarbons class. The sesquiterpenes compounds accounted for 67.9% of the total sample, 49.3% of which belong to the hydrocarbons class and 18.6% to the alcohol class. *M. lineata* had 99.7% of the sample indentified, represented by 26 compounds. The major compounds in *M. lineata* were α-pinene (35.5%), β-pinene (20.3%) and silvestrene (12.8%). The monoterpenes accounted for 90.6% of the sample total, of which 89.2% belong to hydrocarbons class and 1.4% to the alcohol class. The sesquiterpenes comprised 7.5% of the total sample, of which 7.1% belong to the hydrocarbons class and 0.4% to the alcohol class. Thereby the extraction and analyses of the essential oil from *Ardisia humilis* and *Myrsine lineata* was succeeded once the identification was possible of over than 95% of the samples.