Tannins from hydroalcoholic extract of leaves of *Syzygium cumini* (Myrtaceae)

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Introduction: The genus *Syzygium* (Myrtaceae) is comprised by 75 genera (about 3000 species) which are native in the tropics, particularly in tropical America and Australia. *Syzygium cumini*, *Syzygium aromaticum*, *Syzygium jambolanum* and *Syzygium jambos* are the most pharmacologically studied species. Hydrolysable and condensed tannins are oligomeric or polymeric flavanols commonly found in many plant. Their structural characteristics are assumed to be associated to their reported physiological activities, such as antioxidant, antibacterial, antiinflammatory, and vasorelaxing. Material and methods: After a hydroalcoholic extraction, the chemical composition was evaluated through a HPLC-DAD-ESI-MS/MS analysis. The constituents were identified by ion-trap mass spectrometry in negative ion modes and the structures were proposed based mainly on the MS/MS fragmentation data conjugated with the UV-DAD spectral and literature data (Hager T J, Howard LR, Liyanage R, Lay JO, Prior RL. 2008, Journal of Agricultural and Food Chemistry 56, 661-669). Results and discussion: The Ultraviolet spectra of phenolic compounds present in this extract divided the compounds in two groups: those showing a spectrum data in agreement with ellagic acid (maximum wavelengths absorption at 255 and 367nm) and those showing a characteristic spectrum of gallic acid with a maximum wavelength of absorption at 280 nm. Many tannins ellagitanin and galloyl derivatives, such as, pedunculagin (Rt–7.8 min, m/z 782.9); castalagin (Rt–8.4 min, m/z 933.2); gallotannin (Rt–13.0 min, m/z 801.0); granatin (Rt–14.5 min, m/z 951.4); hexahydroxydiphenoyl glucose ditartarate (Rt–14.8 min, m/z 782.9); tetragalloyl glucose (Rt–18.9 min, m/z 787.1); pentagalloyl glucose (Rt–20.7 min, m/z 939.3); methyl ellagitannin galloyl dihydrocaffeate (Rt–22.5 min, m/z 631.1) and galloyl arabinosyl caffeate (Rt–25.3min, m/z 462.9) were found in the hydroalcoholic extract of the leaves. Conclusion: The main constituents found in leaves are hydrolyzable tannins.

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