



COMPARATIVE LC-UV-MS PROFILING OF COLOLOBUS SPECIES FROM THE ATLANTIC FOREST

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The Atlantic Forest is globally recognized as a major Brazilian biodiversity hotspot, playing critical roles in the conservation of plant species and maintenance of ecological balance. The genus *Cololobus*, native to southeastern Brazil, comprises species that are predominantly endemic to this biome. Currently, five species have been formally described: *Cololobus argenteus*, *Cololobus hatschbachii*, *Cololobus longiangustatus*, *Cololobus rupestris*, and *Cololobus ruschianus*. Despite their ecological importance, the chemical composition and metabolic diversity of *Cololobus* species remain largely unexplored. Herein, we evaluate the chemical profiles of four *Cololobus* species. Plant extracts were analyzed by liquid chromatography with ultraviolet detection and coupled to mass spectrometry (LC-UV-MS). Comparative metabolic profiling revealed interspecific variations, showing high prevalence of phenolic compounds. Metabolites displaying ultraviolet absorption typical of flavonoids and hydroxycinnamic acid derivatives were especially prominent. Interestingly, we observed that *C. argenteus* exhibited a less diverse chemical profile (i.e, fewer detected signals), whereas *C. longiangustatus*, *C. ruschianus* and *C. rupestris* presented a more complex metabolic profile. The application of advanced spectrometric techniques enabled a comprehensive chemical characterization of the genus *Cololobus*, expanding the knowledge and providing new insights into the diversification of the Atlantic Forest. These results also strengthen methodological frameworks for investigating secondary plant metabolism and highlight the importance of developing strategies to promote and support the conservation and valorization of Brazilian biodiversity.

Keywords: *Asteraceae*, chemical characterization, secondary metabolites, flavonoids, hydroxycinnamic acid derivatives, natural products

