



**FLAVONOIDS ISOLATED FROM A NATIVE SPECIMEN OF *Ceiba pentandra* (L.) Gaertn.**

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*Ceiba pentandra* (L.) Gaertn., known as sumaúma or sapopema, is a tree species native to the Pantropical region and presents a rich diversity of secondary metabolites, such as fatty acids, steroids, triterpenes, sesquiterpenes, xanthenes, flavanolignans, flavonoids, and other phenolic compounds.<sup>1,2</sup> Among these, flavonoids stand out as the class with the highest number of reports, whose biosynthesis is often associated with plant resistance.<sup>3</sup> In this context, the present study aimed to isolate and identify flavonoids from a native specimen of *C. pentandra*. The wood residues originated from a tree that fell on the campus of the National Institute of Amazonian Research (INPA) due to termite attack on its tap roots. The residues were cut, dried, processed, and identified by comparison with samples available in the Xylotheque (INPA). The residues were then ground and subjected to extraction with hexane followed by methanol at room temperature. To fractionate the methanolic extract and obtain secondary metabolites, column chromatography was used with different stationary phases (silica gel 70-230, 230-400 mesh, and Sephadex LH-20), resulting in the isolation and identification of flavonoids (garbanzol [1], liquiritigenin [2], 7,4'-dihydroxyflavone [3], and 7,4'-dihydroxyflavan-3,4-diol [4]). The structures of these compounds were elucidated by one-dimensional (<sup>1</sup>H and <sup>13</sup>C) and two-dimensional NMR techniques (HSQC and HMBC), through comparison with literature data. This work represents the first phytochemical report of sumaúma wood and the identification of these flavonoids in the genus *Ceiba*.

**Keywords:** Flavanones, Flavone, Flavan-3,4-diol, Malvaceae, NMR.

<sup>1</sup>Das, G., Shin, H. S., Ningthoujam, S. S., Talukdar, A. D., Upadhyaya, H., Tundis, R. Patra, J. K. (2021). Systematics, phytochemistry, biological activities and health promoting effects of the plants from the subfamily bombacoideae (family Malvaceae). *Plants*, 10(4), 651.

<sup>2</sup>Rai, M., Bhattarai, S., Feitosa, C. M. (Eds.). (2020). *Wild plants: the treasure of natural healers*. CRC Press.

<sup>3</sup>Treutter, D. (2005). Significance of flavonoids in plant resistance and enhancement of their biosynthesis. *Plant biology*, 7(06), 581-591.

