Chemical composition of the soluble and insoluble extract of the moss *Brittonodoxa subpinnata* (Brid.) (Sematophyllaceae)

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Bryophytes are the second major and the first group of land plants. Traditionally this group is divided into three paraphyletic lineages Marchantyophyta (liverworts), Anthocerotophyta (hornworts) and Bryophyta (mosses), all of them with great ecological importance in their environment. Recent transcriptomic studies verified a monophyletic clade comprising liverworts and mosses, named Setaphyta, with a possible existence of Bryophyte monophyly. Worldwide it is estimated about 19,000 bryophyte species, being 11,000 of mosses, 7,500 of liverworts and 200 hornworts. Brazil comprises 413 genera and 1,524 species, being 880 mosses, 633 liverworts and 11 hornworts. Bryophytes, despite its great biodiversity, has few phytochemical studies reported. Fewer is the amount of research involving the relationship between the environmental condition and the metabolic profile. Due to the great importance in the environment that bryophytes occur, together with the lack of chemical studies for this group, this study aimed to contribute with the knowledge of bryoflora's chemical diversity, through the study of the chemical composition of *Brittonodoxa subpinnata* (Brid.) W.R. Buck, P.E.A.S. Câmara & Carv.-Silva. Plant material was frozen, crushed and part of the material extracted using 80% methanol followed by alkaline hydrolysis of the cellular residues to obtain soluble and insoluble (Conjugated with the cell wall) constituents. Extracts were submitted to HPLC-DAD-MS/MS analysis with electrospray ionization (ESI). Soluble compounds extract showed 9 major constituents, being 8 isoflavonoids and 1 dihydroflavonol. Five isoflavonoids were identified as orobol derivatives: orobol, orobol hexoside, and 3 orobol malonyl-hexoside, all are compounds usually found in moss species (Basile et al., 1999). Orobol and its glucoside derivative were already found in other moss genus, such as *Bryum* (Anhut et al., 1984). Likewise, the orobol malonyl-glucoside derivatives were also already reported for moss species (Stein et al., 1985). This is the first report of the occurrence of orobol and its derivatives in *Brittonodoxa*, since this species were never chemically investigated. Insoluble compounds extract showed the presence of 3 major classes of compounds: fatty acids, terpenoids and phenolics (such as flavanones, chalcones and biflavonoids), with biflavonoids already being reported in the moss genus *Ceratodon* (Waterman et al., 2017).