Biological activities and phytochemical analysis of extracts *Afrostyrax lepidophyllus* Mildbr. Seeds

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Abstract

Oxidative stress, one of the causes of certain diseases, prompts the search for new antioxidant molecules to reduce or limit the damage caused by it. In this study, the antioxidant, anti-inflammatory and anti-xanthine oxidase activity of the extracts (cyclohexane, dichloromethane, ethyl acetate and methanol) of the *Afrostyrax lepidophillus* seeds used in the human diet and the Central African Pharmacopoeia Been measured. Total pholyphenols, flavonoids, tannins and anthocyanins were also quantified in this work .The IC50 (inhibitory concentration which reduces free radicals by 50%) of the antioxidant activity of their extracts are respectively of the order of 3890,5±4,3, 3313,8±3,5, 1872,8±1,0 et 248,4±0,1 mg/L. The phytochemical analysis of the various extracts (cyclohexane, dichloromethane, ethyl acetate and methanol) made it possible to quantify the polyphenol content of 13,1±0,4, 30,5±0,5, 51,8±1,6 et 33,2±4,0 mg eq AG/g Dry matter (MS). The tannin content is of the order of 2,35±0,3, 10,68±0,1, 7,78±0,2, mg eq Cat/g MS, That of anthocyanins is 0.79 ± 0.04, 0.65 ± 0.02, 1.65 ± 0.07 and 0.18 ± 0.03 mg eq C3GE / g MS. The analysis of the different correlations between the chemical families and the antioxidant activity showed that there is a weak correlation between the biological activity and the phenolic compounds.

Keywords: Biological activity, Phytochemistry, Extracts, *Afrostyrax lepidophyllus.*