

## CHEMICAL COMPOSITION OF THE SEEDS (SEEDCOAT) FROM *Hymenaea courbaril*

Cintia Fidalgo de Matos<sup>1</sup>; Luiz Francisco Malfatti<sup>1</sup>; Luce Maria Brandão Torres<sup>1</sup>.

<sup>1</sup>Núcleo de Pesquisa em Fisiologia e Bioquímica do Instituto Botânico de São Paulo, Avenida Miguel

Estefano 3687 CEP 04045-972, São Paulo, SP, Brazil.

lmb@uol.com.br

The Instituto de Botânica (São Paulo, SP Brazil) has a seed bank and is developing seed storage technology for the conservation of species of Brazilian biomes. The seedcoat plays a fundamental role in the preservation of physiological and biochemical characteristics of the seeds. The seeds of the *Hymenaea courbaril* var. *stilbocarpa* and var. *altissima* has numbness and viability of approximately four months that is related to water intake capacity to the beginning of germination. Our previous work on *H. courbaril* var. *stilbocarpa* using seedcoat powder obtained by manual scarification of the seeds showed that are rich in phenolic compounds which showed strong free radical scavenging activity against 1,1-diphenyl-2-picrylhydrazyl (DPPH)<sup>3</sup>. The aim was study the chemical composition of the extracts of seedcoats to understand the role of natural products (NP) in the protection of seed from *H. courbaril* species. The fruits were collected and seeds were removed, cleaned and placed for three days to hydration at ambient temperature using 325g/200mL H<sub>2</sub>O and 500g/250mL H<sub>2</sub>O for *H. courbaril* var. *altissima* and var. *stilbocarpa*, respectively. The resulting aqueous of hydration were concentrated and lyophilized and the seedcoat were manually removed of the hydrated seeds, lyophilized and hydrated and sprayed (Tecnal mill). The hydroalcoholic extracts were prepared by maceration with powder of the seedcoat (1g/5mL alcohol 70%, 3 days, 3x) and the hydrocetic extracts (70%) were prepared using the residual materials of the extractions. These extracts were submitted to coupled chromatography with mass spectrometry (GC-MS), ultraviolet (HPLC/UV), thin layer chromatography (TLC) with derivatization reagents, DPPH assay and authentic standards gallic acid and quercetin as positive controls. Data analysis showed that gallic acid is the main component of aqueous part resulting from the hydration of seeds (56%). The gallic acid is soluble in water, has strong free radical scavenging activity against (DPPH) and may explain our results.

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