



VALIDATION AND QUALITY ANALYSIS OF STRYCHNOS Pseudoquina USING HPLC–DAD

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The Quina Cerrado is native to Brazil, popularly known as "Quina" the Strychnos genus has about 200 species, many known for their medicinal potential from secondary metabolites [1]. The fractionation of the ethyl acetate extract of the bark driven by *S. pseudoquina*, BIOPROS led to the isolation of two flavonoid 3-O-methyl ether quercetin (SPEA 1) and strychnobiflavona (SPEA 2) showed antileishmanial activity. This fact led to the validation of a method for quantifying such markers in *S. pseudoquina*. The validated method was used to evaluate the quality of three commercial samples of quina plus four different access *S. pseudoquina*.

For method validation, the inner bark of *S. pseudoquina* were collected in Jaboticatubas, MG (A1). Samples of access Uberlândia, MG (A2), Rio Verde, GO (A3), Montes Claros (A4) and commercial samples of identified quina as C1, C2 and C3 were analyzed. The plant material was dried, pulverized and submitted to extraction by sonication using ethyl acetate. The extract was concentrated in a rotary evaporator and the residue was resuspended in methanol. The validation was performed on Shimadzu HPLC, C18 column (250 x 4.6mm), gradient elution, oven temperature 30 ° C and flow of 1.0 ml / min.

The method showed linearity ($r^2 > 0.99$), selectivity, precision (RSD <0.26% for SPEA 1 and 0.21% for SPEA 2), accuracy (recovery from 95.84% to 100% for 1 and SPEA 94.01% to 98.22% for SPEA 2) and robustness. The levels of markers in the samples are shown in Table 1.

Table 1: Results for markers in the samples .

SAMPLES	SPEA 1 (mg/g)	SPEA 2 (mg/g)
A1	2,65	2,7
A2	3,66	10,79
A3	0,15	1,41
A4	0,23	0,18
C1	0,00	0,00
C2	0,00	0,00
C3	0,00	0,00

The method was validated, samples from different accessions of *S. pseudoquina* showed significant differences in SPEA1 and SPEA2 content. Commercial samples of Quina showed differences in the fingerprint, indicating not treat the species *S. pseudoquina*. This represents a risk to the consumer, since it does not know the safety and efficacy of these plant drugs.

References:

[1] P. Corrêa, *Dicionário das Plantas Úteis do Brasil e das Cultivadas Exóticas*, 1952.