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## Application of microwave-assisted extraction to the fast extraction of plant phenolic compounds in *Lafoensia pacari* A. St.-Hil

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*Lafoensia pacari* A. St.-Hil stands out for its therapeutic properties, used as a diaphoretic, healing, anti-inflammatory and analgesic. Among its major active constituents are the phenolic compounds. Given the need for use of pacari constituents, it becomes important to study suitable extraction methods. The extraction assisted by microwave irradiation may be considered a method with high efficiency in extraction of bioactive compounds, having advantages such as lower consumption of reagents and shorter time of extraction. This study aimed to develop an extractive method using as a source of heat radiation in the frequency of microwave. The extraction procedure was conducted by conventional extraction analysis in conjunction with extraction analysis by microwave irradiation with a view to the dosing of phenols, tannins, the method adapted Hagerman and Butler, total flavonoids and method adapted by Rolim et al., 2005. The contents of total phenols, total tannins and flavonoids extracted using conventional extraction were 11.91%, 7.12% and 5.11%, respectively and the extraction by microwave irradiation comprising the track 10, 10 to 14.81%, 7.05 to 9.33%, and 3.90 to 6.96%, respectively. Quantitative analysis of phenols, tannins and flavonoids present in pacari shells as measured by spectrophotometry in the ultraviolet and visible region extracted by microwave irradiation is equivalent to the conventional method. However, it took less time for extraction, reduced sample volume and lower power consumption.

### Biography

Possui graduação em Farmácia pela Universidade Federal Fluminense (1991), mestrado em Química pela Universidade de São Paulo (1995) e doutorado em Química pela Universidade de São Paulo (2000). Atualmente é professor do Curso de Farmácia e do programa de mestrado em Ciências Moleculares da Universidade Estadual de Goiás. Tem experiência na área de Química Orgânica e Química Medicinal, com ênfase em Síntese Orgânica, atuando principalmente nos seguintes temas: Planejamento e síntese de substâncias bioativas, estudos de reações de hidroformilação, reações assistida por irradiação de microondas, Biotransformação de Produtos naturais utilizando fungos como biocatalisadores.

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