Validation of analytical method for quantification of ellagic acid in fruits peels from *Myrciaria cauliflora* (Mart.) O. Berg.

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Palavras Chave: jaboticaba; peels; HPLC.

Introduction: The jaboticaba (*Myrciaria cauliflora* (Mart.) O.Berg. is a small tree native to the southern Brazil region, grown for the purple, grape-like fruits. Traditionally, an astringent decoction of the sun-dried skins has been used as a treatment for hemoptysis, asthma, and diarrhea and gargled for chronic inflammation of the tonsils. It is known that the peel of the fruit have various phenolic compounds such as: myricitrin, cinnamic acid, O-coumaric acid, gallic acid, protocatechuic acid, methyl protocatechuate and ellagic acid (Reynertson, K. A, *J. Nat. Prod.*, 69, 1228, 2006).

The aim of this study was to validate an analytical technique for quantification of ellagic acid present in the peels of *M. cauliflora*.

Experimental: Analyses were performed using a chromatographic system from Waters®, model HPLC - Alliance, separation module e2695, diode array detector e2998 (PDA) and data processing system Enpower 3. The chromatographic separations were conducted in column Zorbax eclipse XDB 5μm, C18, 250X4.6 mm. The mobile phase consisted of 60 % of solvent A (methanol) and 40 % of solvent B (0.5% (v/v) ortho-phosphoric acid in water) under isocratic flow of 0.5 mL/min for 20 min. Detection wavelength was 252 nm to ellagic acid. The analytical method was validated according to guideline 899/2003 from National Agency for Sanitary Surveillance of Brazil (ANVISA).

Results/Discussion: The method was linear, with $R^2 = 0.9978$, accurate, with a coefficient of variation of less than 5% with an assay with two different analysts. The recovery method ranged from 99.51% to 101.38%. The method was also robust, with a variation of less than 5% in ellagic acid content. The limits of detection and quantification found were 3.9 and 13.01 mg/mL, respectively. Conclusion: The parameters tested in accordance with the resolution 899/2003 were within the prescribed values, demonstrating that the method can be used for quantification of ellagic acid in fruit peels of *M. cauliflora*. Funding: CAPES and CNPq. Acknowledgment: We would like to thank CAPES and CNPq for financial support.