CONTENTS OF CHLOROGENIC ACIDS IN COURSE, MEDIUM AND FINE GROUND COFFEES BREWED BY DIFFERENT METHODS

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Inumerous potential health benefits have been reported for coffee in the literature. Chlorogenic acids (CGA) are important bioactive compounds in coffee. Their contents in the brew may vary according to blend composition of green beans, roasting method and degree, roasted coffee grid and the brewing method. Regarding the grid, the main basic ranges of particles size available in ground and roasted commercial coffees, are called coarse, medium and fine. The aim of this study was to evaluate the effect of brewing method and grid on CGA contents in brewed coffee. *Coffea arabica* and *Coffea canephora* beans were roasted to light-medium and moderately-dark degrees (#45 and #75, respectively, SCCA) and ground to fine, medium and course grids (mesh 24, 20 and 14, respectively). Blends prepared with 80% *C.arabica* and 20% *C.canephora* beans were used for brews preparation at 10% (weight/volume), by the following methods: simple percolation (using paper, nylon and cloth filters) electric coffee maker (paper and nylon filters), espresso machine (including or not pre-infusion), and Italian coffee pot. The brews were analyzed by HPLC-DAD-reverse phase system according to Farah et.al. (2005) and results were compared by ANOVA. Eight CGA were quantified in the brews.

As expected, higher CGA contents were obtained from fine ground coffees, followed by medium and course. The Italian coffee pot was the most effective method to promote brews with higher CGA content (245mg/100mL, fine grid), followed by electric coffee maker using paper and nylon filters (166mg/100mL; 159mg/100mL, respectively) and espresso machine with and without pre-infusion (130mg/100mL;126mg/100mL, respectively).

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