

## ANALYSIS OF THE CONTENT OF THE DITERPENES CAFESTOL AND KAHWEOL IN COFFEE BREWS.

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Resumen: The diterpenes cafestol and kahweol have been implicated as the components in boiled coffee responsible for its hypercholesterolaemic effects. These particular coffee constituents have also been shown to possess anticarcinogenic effects. A simple and sensitive reverse-phase HPLC method using solid-phase extraction has been developed for the analysis of cafestol and kahweol in coffee brews. This method was used to confirm that the method of coffee brewing is a major determinant of the cup content and hence level of consumption of these diterpenes. Scandinavian-style boiled coffee and Turkish-style coffee contained the highest amounts, equivalent to 7.2 and 5.3 mg cafestol per cup and 7.2 and 5.4 mg kahweol per cup, respectively. In contrast, instant and drip-filtered coffee brews contained negligible amounts of these diterpenes, and espresso coffee contained intermediate amounts, about 1 mg cafestol and 1 mg kahweol per cup. These findings provide an explanation for the hypercholesterolaemic effect previously observed for boiled coffee and Turkish-style coffee, and the lack of effect of instant or drip-filtered coffee brews. This methodology will be of value in more correctly assessing the human exposure to these diterpenes through the consumption of coffee, and hence the potential physiological effects of different brews.