

## Effect of Brewing on the Bioactive Compounds of Coffee

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**Abstract :** Coffee was introduced as an economic crop during the fifteenth century; nowadays it is the most important food commodity ranking second after crude oil. Desirable sensory properties make coffee one of the most often consumed and most popular beverages in the world. The coffee preparation method has a significant effect on flavor and composition of coffee brews. Three different extraction methodologies namely decoction, infusion and pressure methods have been used for coffee brew preparation. Each of these methods is related to specific granulation (coffee grind) of coffee powder, water-coffee ratio temperature and brewing time. Coffee is a mixture of 1500 chemical compounds. Chemical composition of coffee highly depends on brewing methods, coffee bean species and roasting time-temperature. Coffee contains a wide number of very important bioactive compounds, such as diterpenes: cafestol and kahweol, alkaloids: caffeine, theobromine and trigonelline, melanoidins, phenolic compounds. The phenolic compounds of coffee include chlorogenic acids (quinyl esters of hydroxycinnamic acids), caffeic, ferulic, p-coumaric acid. In coffee caffeoylquinic acids, feruloylquinic acids and di-caffeoylquinic acids are three main groups of chlorogenic acids constitutes 6% -10% of dry weight of coffee. The bioavailability of chlorogenic acids in coffee depends on the absorption and metabolization to biomarkers in individuals. Also, the interaction of coffee polyphenols with other compounds such as dietary proteins affects the biomarkers. Since bioactive composition of coffee depends on brewing methods effect of coffee brewing method on bioactive compounds of coffee will be discussed in this study.

**Keywords :** bioactive compounds of coffee, biomarkers, coffee brew, effect of brewing

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