

Determination of the Element Contents in Turkish Coffee and Effect of Sugar Addition

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Abstract : Coffee is a widely consumed beverage with many components such as caffeine, flavonoids, phenolic compounds, and minerals. Coffee consumption continues to increase due to its physiological effects, its pleasant taste, and aroma. Robusta and Arabica are two basic types of coffee beans. The coffee bean used for Turkish coffee is Arabica. There are many elements in the structure of coffee and have various effect on human health such as Sodium (Na), Boron (B), Magnesium (Mg) and Iron (Fe). In this study, the amounts of Mg, Na, Fe, and B contents in Turkish coffee are determined and effect of sugar addition is investigated for conscious consumption. The analysis of the contents of coffees was determined by using inductively coupled plasma optical emission spectrometry (ICP-OES). From the results of the experiments the Mg, Na, Fe and B contents of Turkish coffee after sugar addition were found as 19.83, 1.04, 0.02, 0.21 ppm, while without using sugar these concentrations were found 21.46, 0.81, 0.008 and 0.16 ppm. In addition, element contents were calculated for 1, 3 and 5 cups of coffee in order to investigate the health effects.

Keywords : health effect, ICP-OES, sugar, Turkish coffee

Conference Title : ICCB 2016 : International Conference on Chemistry and Biochemistry

Conference Location : San Diego, United States

Conference Dates : January 21-22, 2016