



Quantitative Analysis of Caffeine Content in Different Samples of Chocolate

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Abstract : *Chocolate is a typically sweet, most pleasurable food obtained from Theobroma cacao seeds whose major component is cocoa solids. The most important methylated alkaloid that occurs naturally in cocoa solid is caffeine. Caffeine is a bitter, white crystalline purine, methylxanthine alkaloid and is a widely consumed psychoactive drug. In the present study extraction of caffeine from chocolate was done using dichloromethane and was comparatively studied and also its effect on human health. It was found that Kopiko candy contained the maximum amount of caffeine whereas dairy milk had the least amount of caffeine content. Dark chocolate like Amul Dark chocolate had average caffeine content. The calories imparted and carbohydrate content differs extensively among chocolates. The other components like flavinoids which is an antioxidant make dark chocolate healthier when consumed wisely.*

Keywords: *Chocolate, Caffeine, Psychoactive drug.*

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Introduction :

Chocolate is a brown food preparation of *Theobroma cacao* seeds, roasted and grounded. It is made in the form of a liquid, paste, or in a block, or used as a flavoring ingredient in other foods. After fermentation; the beans are dried, cleaned, and roasted. Chocolate contains cocoa solids and cocoa butter in varying proportions, without any added sugars it is sweet. Much of the chocolate consumed today is in the form of sweet chocolate, a combination of cocoa solids, cocoa butter or added vegetable oils and sugar. Milk chocolate is sweet chocolate that additionally contains milk powder or condensed milk. In the UK and Ireland, milk chocolate must contain a minimum of 20% total dry cocoa solids; in the rest of the European Union, the minimum is 25% whereas according to Indian standards set by FSSAI a minimum of 2.5% by mass of cocoa solids is found in milk chocolate which varies in different chocolates produced by the manufacturer. White chocolate contains cocoa butter, sugar, and milk, but no cocoa solids.

Dark chocolate contains cocoa solids, cocoa butter, sugar and emulsifiers (Emmanuelle et. al., 1996).

Cocoa solids are a source of flavonoids and alkaloids, such as theobromine, phenethylamine and Caffeine. (Gaffan et.al. 2004) The most