**Detection of 4-methyl imidazole in dark soft drinks**

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**Abstract**

The coloring agent caramel is used in a variety of popular drinks like beers, dark soft drinks another food product. The manufacturing process of these drinks and food product can expose consumers to 4-methylimidazole (4-MEI), and its possible carcinogen (1).

Although a standardized categorization for 4-methylimidazole (4-methylimidazole) has not yet been determined, there are a number of issues regarding the substance's toxicity to humans. (2)

the goal of the current study is to determining the 4-methylimidazole levels in soft drinks (Cola) from the local market in IRAQ/Baghdad 2023, fifty soft drink samples(cola) in total were gathered and examined HPLC technique, 20% of samples contain high concentration of (4-methylimidazole) above (250ppm) and its higher than the permissible limits,4-methylimidazole is not a genotoxic carcinogen, according to many Genotoxicity research. Consequently. (3)

***key words: 4-methylimidazole, cola, dark soft drinks, HPLC***

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