

The analysis of status of added colors to dried sweets in South of Tehran using thin layer chromatography

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Abstract

Background&Objective: Foodstuffs additives are a general term for materials that are added to the foodstuffs in order to increase durability and to improve the appearance, composition, taste and food nutritional value. Colors are classified in this group and are added to foodstuffs in order to increase their attraction. Colors may cause illness such as allergy, rash and hyper activation in children and also they may debilitate the Immune system, Anaphylaxis reactions may also occur and they may have cancerous effect. The aim of this survey was to analyze status of added colors to the dried sweets which are produced in south of Tehran city.

Materials & Methods: 191 samples of dried sweets were randomly collected and analyzed from south of Tehran areas. First, the samples were de-colored by Chlorhidric Acid, and then were analyzed after refining by Thin Layer Chromatography (T.L.C) method. Samples were identified by taking Retention Factor (RF values) into consideration.

Results: 93.2 percent from the total samples contained colors. Among chromatic samples, 42 samples (22%) out the total samples, contained artificial, non-edible colors and 96 samples (50.3%) from the total samples contained artificial and edible colors (for Industrial Producers) and 40 samples (21%), contained natural colors. Sunset yellow color was detected more than other added colors in sweets.

Conclusion: Low costs, stability, PH, purity, and environmental conditions, motivate the producers for high utilization of edible colors without considering their possible hazards and/or their edible quality aspects. It is suggested that, based on the findings of this study and high consumption of colors.

Key Words: Color, Dried Sweets, Chromatography, South of Tehran