

Coloring in Tea

Adulteration of food creates health problem and consumption of adulteration food is not advisable/advocated from Food Safety point of view. Use of color in different food items in our country has been followed according to the guide lines of FSSAI, Govt. Regulatory body.

FSSAI 2011 regulation 2.10.1 (1) on Tea mentions that “The product shall be free from extraneous matter, added colouring matter and harmful substances”

There are some permitted colors which are nontoxic, are allowed to be used in different food products like sweets, fruit juice etc. FSSAI permits use of 8 synthetic colors in specific food items and tea is not included in that list.

Color adulteration is strictly prohibited from consumer health point of view and coloring of tea has gradually become a matter of serious concern these days. The treatment of teas with various coloring matters comes under the head of adulterants.

Tea (finished product/made tea) occasionally contains extraneous coloring material which are not allowed, called adulterant tea. There are occasional reports that sub standards tea leaves were used to be colored with Bismark Brown, Potassium Blue, Turmeric, Indigo,Plumbago etc. to impart some favourite color or glossiness to the product.

Tea leaves which were damaged during manufacturing process or are of inferior quality are being treated with various coloring agents to improve their appearance and price. Coloring matters which are added to tea do not add any value to the product. Black teas are usually treated with Plumbago (Black Lead). Plumbago is used in lead pencils. There is no evidence that using this agent for coloring tea is deleterious to health. However, adding foreign matter to the teas for the purpose of deception should be strongly discouraged. Scientific studies are required to evaluate the impact of using color to human health.

Prussian Blue is also used in coloring tea. However, reports suggest that it is a toxic substance. Adulteration in tea leaves is done by treating processed leaves with a mixture containing Prussian blue, turmeric or indigo etc.

Detection of color in tea – It is very difficult to identify color adulteration in tea. Simple screening test can help us to detect color in tea. The test includes use of microscope to visualize the color in a magnified manner under microscope. The portion of the leaves can be mounted as an opaque object, the coloring matter is present will appear in small dots. There are some chemical methods to identify the color in substance in tea.

Artificially coloured tea can be detected by simply rubbing a small quantity of tea between thumb and fore finger. Artificially coloured tea leaves a bright stain when

rubbed. Another simple way to detect colouring in tea is to fill a clear glass with cold water and put some tea on the surface. If the colour of water changes immediately, it is for sure that tea has been dyed with water soluble colours.

Detection of coloring agents in tea (which is either soluble or insoluble in water) can be done by using analytical equipment such as HPLC alone or in combination with other method such as MS. Therefore, extraction of dyes from the food followed by dissolving water/solvent and separation using chromatographic procedures are the steps to be done.

There is no such provision for use of color in tea. **Tea Board strongly advises to follow the guidelines of FSSAI for not using any color in tea** creating problem to food safety, human health, tea trade & quality. **Violation of the above guidelines may attract legal action.**

