

## COMMON FOOD ADDITIVES FOUND IN FOODS AVAILABLE IN THE BAHADURGARH CITY MARKET

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### ABSTRACT

Large quantities of additive were found to be present in the common food stuff available in Bahadurgarh localities. The reason for development and use of food additives are to preserve the food from waste and spoilage, increased desire for variety in foods and creativity in cooking, to require little preparation time for working woman etc. therefore to familiarize oneself with food additives and conduct the survey for availability of common foods containing additives in the market. A study was undertaken using qualitative sampling procedure to know the use of additive in three different markets in Bahadurgarh city. The results indicated that citric acid, antioxidants, Natural and artificial colour, Emulsifiers, preservatives and Flavouring agents were used most commonly amongst food additives in food products. It was concluded that food additives which were most commonly used in food products have side-effects on the human body. So, safety in using an additive was an all important consideration.

**Keywords:** food additives; Antioxidants, Preservatives; Emulsifiers and Flavoring agents.

### INTRODUCTION

The use of additives is not new in the twentieth century, when humans first learned that fire would cook and preserve their meat and that salt (sodium chloride) would preserve it without cooking, the use of additives began. Food colors were used in ancient Egypt. In China, Kerosene was burned to ripen bananas; the reason this method succeeded, although the Chinese did not know it, was that the consumption produced the ripening agent ethylene. Flavouring and seasoning were arts in many ancient civilization, and as a result, spices and condiments were important items of commerce. Columbus sailed for the indies, in search of food preservation and technology has increased, our use of additives has also increased (Kaushik, 1999). New and widely publicized discoveries have increased the food purchaser's awareness of nutritional needs and have impressed him with the importance to health of a well- balanced diet. Specific foods are enriched or fortified to help supply these needs. There is an increased desire for variety in foods and creativity in cooking. Foods from local and distant places provide greater variety in choices. The increasing complexity of family life and the number of working wives and mothers have created a desire for convenience foods that require little preparation time. Among the reasons of development and used food additives, the present study was conducted the survey for availability of common foods containing additive in the markets and to familiarize oneself with food additives.

### METHODOLOGY:

An exploratory market survey was conducted using a list of 100 food products. A qualitative sampling procedure was used to find out which additives are used in those foods.

**RESULT:**

The results showed that the citric acid, antioxidants, natural and artificial colour emulsifiers, preservatives, artificial flavor were most commonly used.

- **Citric acid** is a food acid. The sharpness in the taste of any food is due to the presence of this acid. Citric acid is present in all fresh juices, Namkeen, Chewing gum, Fruit Bear and in many ready- to- eat products such as Sambhar Mix, Khaman Dhokla mix etc. There is no harmful effects of citric acid.
- **Antioxidants** are used to preserve food by retarding deterioration, rancidity and discoloration due to oxidation. Antioxidant is present in many ready to eat products, Bakery products, and table- Margarine etc. Butylated hydroxyl anisole (BHA) (E320) used in soup mixes and cheese spread. BHA has been linked with urticaria, angioedema and asthma. It is allowed in very low quantities 0.01 to 0.05% with certain restriction.
- **Food colors** are used to impart, preserve, and hence the color or shading of a food. Food colors are present in Maggi Noodles, Biscuits, juices, cakes, chocolates products, jam, milk powder, cheese and custard powder.

**Curcumin (E 100)**, used mainly in flour, confectionery and margarine, has been found to cause mutations in bacteria and when fed to pigs, it increased the weight of their thyroid glands causing, in high doses, severe thyroid damage.

**Sunset yellow (E110)**, used in biscuits, has been found to damage kidneys and adrenals when fed to laboratory rats.

**Carmoisine (E122)**, used mainly in jams and preserves, was found by the US certified colour manufacturers Association to be unavoidably contaminated with low levels of beta- naphthylamine, which is a well-known carcinogen.

**Ponceau 4R (E124)**, used mainly in dessert mixes, has been found to exhibit a weak carcinogenic action.

**Caramels (E150)**, used as a coloring agents in crisps, bread, sauces, chocolates products. Caramels can affect adversely the levels of white blood cells and lymphocytes.

- **Preservatives** means a substance when added to food, is capable of inhibiting, retarding or arresting the process of fermentation, acidification or other decomposition of food [Under rule 52 of the PFA rules 1955]. Preservatives are found in fruit based filling, jam, soft drinks, juices and syrups, fruits based dairy desserts, beers and in pickles.

**Benzoates (E210-219)**, used mainly in marinated fish, fruit based fillings, jam, salad cream, soft drinks as beer, have been found to provoke urticaria, angioedema and asthma. The permitted quantity of Jam is 200 ppm.

**Sulphites (E220-E227)**, used mainly in dried fruits, fruit juices and syrups, fruit based dairy desserts, biscuit doughs, cider, beer and wine has been linked with urticaria, angioedema and asthma. The permitted quantity of fruit juices 350ppm, syrups 450ppm, cider 200ppm, beer 70ppm, wine 450.

**Nitrates and nitrites (E249-E252)**, used in cheese and other products, have been found to cause head aches in susceptible individuals. In addition, these chemicals have been linked with cancer in human studies.

- **Flavors** are added to impart a taste or aroma in food. Flavours are present in instant noodles, dairy products, chips, drinks, soups, juices, gums, jam and margarine. Monosodium glutamate (MSG), a flavour enhancer, used in savoury foods, snacks, soups, sauces and meat products, has been associated with a conjunction of symptoms in susceptible individuals, such as severe chest and / or facial pressure and overall burning sensations, not unlike a feeling that the victim is experiencing a heart attack.
- **Emulsifiers** are those substances that modify surface tension in the component phase of an emulsion to establish a uniform dispersion. Emulsifiers are present in dressings, Ice-creams, margarine, jam, bread, drinks, noodles, soups, chocolate.

Food additives like sequestering agent (in margarine), glazing agent (in flavored gum), sweeteners in sweetener biscuits for diabetes, short bread cookies (sugar free) & mouth freshener) and food acids like phosphoric acid were rarely used in food product.

## CONCLUSION

The study was undertaken on 100 food products available in market, which contain food additives. Result showed that, citric acid, antioxidants, Natural & Artificial colour, emulsifiers, preservatives, artificial flavors, were used as most commonly food additives in food products. Food additives like sequestering agents, glazing agents, sweeteners and food acids (except citric acid) were rarely used on food products. Food additives are used to preserve the foods from waste and spoilage, to increase desire for variety in foods and creativity in cooking to require little preparation time for working wives and mothers, to improve nutritional value, and maintain palatability and wholesomeness. But with the great increase in the use of food additives, here has emerged considerable scientific data linking food tolerance with various physical and mental disorders.

## REFERENCES

1. Encyclopedia of chemical Technology, volume 3, IIIrd Ed., A Wiley, Interscience Publication, John Wiley and Sons, 1978, pp. 778.
2. Kaushik, V.K. (1999); Problems of food, Nutrition and Dietetics: Jaipur, Book Enclave.
3. Mahindru, S.N. (2000); Food additives-characteristics, Detection and Estimation, Tata Mc Graw-Hill Publishing Company Ltd. New Delhi.
4. Rajesh kumar and A. Yadav 2010.: Common food additives found in foods in markets of Dwarka, New Delhi. Global Education Society and Development, 1(4):52-54