Food Adulteration and law

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Abstract

"Adulteration" is a legal term meaning that a food product fails to meet federal or state standards. Adulteration is an addition of another substance to a food item in order to increase the quantity of the food item in raw form or prepared form, which may result in the loss of actual quality of food item. These substances may be other available food items or non-food items. Among meat and meat products some of the items used to adulterate are water or ice, carcasses, or carcasses of animals other than the animal meant to be consumed.

Keywords food adulteration, act, environment protection act

Introduction

FOOD Adulteration.

Food is the basic necessity of life. One works hard and earns to satisfy our hunger and relax (enjoy) later. But at the end of the day, many of us are not sure of what we eat. We may be eating a dangerous dye, sawdust, soap stone, industrial starch, and aluminum foil and so on! Contaminated foods and drinks are common sources of infection. Often, we invite diseases rather than good health. Food adulteration is an act of intentionally debasing the quality of food offered for sale either by the admixture or substitution of inferior substances or by the removal of some valuable ingredient. Food adulteration takes into account not only the intentional addition or substitution or abstraction of substances which adversely affect nature, substances and quality of foods, but also their incidental contamination during the period of growth, harvesting, storage, processing, transport and distribution.

“adulterant” means any material which is or could be employed for making the food unsafe or sub-standard or mis-branded or containing extraneous matter. Food is adulterated if its quality is lowered or affected by the addition of substances which are injurious to health or by the removal of substances which are nutritious. It is defined as the act of intentionally debasing the quality of food offered for sale either by the admixture or substitution of inferior substances or by the removal of some.

What is adulteration?

An adulterant is a chemical substance which should not be contained within other substances (e.g. food, beverages, and fuels) for legal or other reasons. The addition of adulterants is called adulteration.

The word is appropriate only when the additions are unwanted by the recipient. Otherwise the expression would be food additive. Adulterants when used in illicit drugs are called cutting.
agents, while deliberate addition of toxic adulterants to food or other products for human consumption is known as poison.

Adulteration in water:
Water that has been adequately chlorinated, by using the minimum recommended water treatment standard provide protection against viral and bacterial waterborne diseases. However, chlorine treatment alone, as used in the routine disinfection of water, might not kill some enteric viruses and the parasitic organisms that cause giardiasis, amoebiasis, and cryptosporidiosis. In areas where chlorinated tap water is not available or where hygiene and sanitation are poor, one is advised that only the following might be safe to drink: Beverages, such as tea and coffee, made with boiled water. The safety of canned or bottled carbonated beverages, including carbonated bottled water and soft drinks is questionable nowadays.

Where water might be contaminated, one is advised that ice should also be considered contaminated and should not be used in beverages. If ice has been in contact with containers used for drinking, one should thoroughly clean the containers, preferably with soap and hot water, after the ice has been discarded.

Food Adulteration – A Threat to Consumers:

One is familiar with the famous saying of one of the past prime ministers of India describing corruption as universal and not confined to India. Same appears to be true with food adulteration also. It is surprising that the fraudsters are always one step ahead of the safety agencies when it comes to detecting adulteration and their techniques are increasingly becoming more and more sophisticated with time. Food frauds literally constitute a high tech industry because of the enormous economic gains inherent in adulteration. Interestingly costlier the food product, more incentive is available for evolving appropriate methods to mimic the original product with cheap alternatives. Here is a gist of the report that elaborates on economic frauds perpetrated in the US based on reliable data base.

"Olive oil, milk, honey, saffron, orange juice, coffee and apple juice are the seven most likely food ingredients to be targets for intentional or economically motivated adulteration of food, or food fraud, according to analysis of the first U.S. public database created to compile information on risk factors for food fraud published in the Journal of Food Science. The database was created by the U.S. Pharmacopeial Convention (USP) and provides baseline information to assist interested parties in assessing the risks of specific products. It includes a total of 1,305 records for food fraud based on a total of 667 scholarly, media and other publicly available reports. Food fraud is a collective term that encompasses the deliberate substitution, addition, tampering or misrepresentation of food, food ingredients or food packaging, or false or misleading statements made about a product for economic gain. A more specific type of fraud is the fraudulent addition of non-authentic substances or removal or replacement of authentic substances without the purchaser's knowledge for economic gain of the seller. According to the authors of the paper, food fraud may be more risky than traditional threats to the food supply because the adulterants used in these activities often are unconventional and designed to avoid detection through routine analyses. "The vast majority of food fraud is primarily technical and economical," said John Spink, associate director with the anticounterfeiting and product protection program at Michigan State University. "However, there are some cases where there can be serious health consequences as illustrated when melamine was added to infant formula..."
and pet food in order to falsify the level of protein content in these products.” When it comes to food adulteration no other country can beat India because this is a country where every one has unlimited freedom to indulge in such activities with no possibility of retribution. Though food laws that exist are comparable to international ones, there is very little activity at the ground level to monitor or detect adulterated foods in the market or punish the guilty. Milk is mentioned as one of the top adulterated products but can any country beat the ingenuity of the Indian fraudsters in evolving a milk completely without a cow or a buffalo, using ingredients like detergents, urea, cheap oil etc that competes with genuine milk in the market with complete impunity? Of course Chinese may be providing close competition by using the deadly Melamine to increase protein values in milk for economic gains! Saffron is another commodity that attracts fraudsters like the honey beckoning the bees! Consumers are invariably advised by well meaning pundits that they should go for branded foods marketed by established food manufacturers but it is like asking people to eat cake if bread is not affordable! Besides almost all commodities that do not undergo any significant are not available in the branded format from reputed industry players. There does not appear to be any lasting solution to this vexed problem. Stringent punishment to proven fraudsters in double quick time, if made the hallmark of the food safety regime, may see a decline in adulteration cases significantly. A separate and dedicated food fraud court stream under the judiciary for fast tracking such cases may also have a deterrent effect.

Procedure for sampling and analysis:
Any food inspector can enter and inspect any place where any article of food is manufactured or stored for sale or stored for the manufacture of any other article of food for sale or exposed or exhibited for sale or where any adulterant is manufactured or kept and take samples of such article of food or adulterant for analysis. Notice will be issued by the inspector in writing then and there to the seller indicating his intention. Three samples are taken and the signature of the seller is affixed to them. One sample is sent for analysis to Public Analyst under intimation to the Local Health Authority.

Notable incidents

Nut paid $2.2 million in fines for violating the Federal Food, Drug, and Cosmetic Act by selling artificially flavored sugar water as apple juice.[9]

In 1997, ConAgra Foods pled guilty to federal criminal charges that one of its units illegally sprayed water on stored grain to increase its weight and value.[10]

In 2007, samples of wheat gluten mixed with melamine, presumably to produce artificially inflated results from common tests for protein content, were discovered in many U.S. pet food brands, as well as in human food supply. The adulterated gluten was found to have come from China, and U.S. authorities concluded that its origin was the Xuzhou Anying Biologic Technology Development Company, a Xuzhou, China-based company. (See: Chinese protein adulteration.)
In 2008, significant portions of China's milk supply were found to have been contaminated with melamine. Infant formula produced from melamine-tainted milk killed at least six children and were believed to have harmed thousands of others. (See: 2008 Chinese milk scandal.)

In 2012, a study in India conducted by the Food Safety Standards Authority of India (FSSAI) across 33 states found that milk in India is adulterated with detergent, fat and even urea, as well diluted with water. Of the 1791 random samples from 33 states, just 31.5% of the samples tested (565) conformed to the FSSAI standards while the rest 1226 (68.4%) failed the test. See: 2012 India milk adulterant scandal.

Food adulteration in India seems to be getting deadlier by the day. First we had some unscrupulous dairy farmers in western Uttar Pradesh inventing synthetic milk a deadly cocktail of urea, caustic soda and vegetable oil. Then we had reports of fruits, particularly mangoes, being ripened with calcium carbide and now, there are reports of fish being made to appear fresh with formalin.

**SALE OF CERTAIN ADMIXTURES PROHIBITED**

Sale by himself or by his servant or agent is prohibited in case of :-

a. cream which has not been prepared exclusively from milk or which contains less than 25% of milk fat

b. milk which contains added water

c. ghee which contains any added matter not exclusively derived from milk fat

d. selling skimmed milk as whole milk

e. mixture of two or more edible oils as an edible oil

f. vanaspati to which ghee or any other substance has been added

g. any article of food which contains any artificial sweetener beyond the prescribed limit

h. turmeric containing any foreign substance

i. mixture of coffee and other substance except chicory

j. dahi or curd not made out of milk
k. milk or milk products containing constituents other than of milk

**PROCEDURE FOR SAMPLING AND ANALYSIS**

Any food Inspector can enter and inspect any place where any article of food is manufactured or stored for sale or stored for the manufacture of any other article of food for sale or exposed or exhibited for sale or where any adulterant is manufactured or kept and take samples of such article of food or adulterant for analysis.

a. notice will be issued by the Inspector in writing then and there to the seller indicating his intention

b. three samples are taken and the signature of the seller is affixed to them

c. one sample is sent for analysis to Public Analyst under intimation to the Local Health Authority

d. The other two samples are sent to the local health authority for further reference

**PENALTIES**

Guilt will be punished with imprisonment for a term which shall not be less than six months and upto 3 years and with fine upto one thousand rupees

**IMPORTANT MISCELLANEOUS PROVISIONS**

1. If any extraneous additions of colouring matter is added, the same should be indicated on the labels
2. From the labels the blending composition of ingredients should be clear to the customer
3. Sale of kesari gram individually or as an admixture is prohibited
4. Prohibition of use of carbide (acetylene) gas in ripening is prohibited
5. Sale of ghee with Reichert value less than the permitted level
6. Sale of admixture of ghee or butter is prohibited
7. Addition of artificial sweetener should be mentioned on the label
8. Sale of food colours without license prohibited
9. Sale of insect damaged dry fruits and nuts prohibited
10. Food prepared in rusted containers, chipped enamel containers and untinned copper/brass
    utensils are treated as unfit for human consumption
11. Containers not made of plastic material which is not according to the standards are not to
    be used
12. Selling salseed fat or any other purpose except for bakery and confectionery is prohibited
13. Store of insecticides in the same premises where food articles are stored is prohibited
14. Milk powder or condensed milk can be sold only with ISI mark
15. Use of more than one type of preservative is prohibited
16. Crop contaminants beyond certain specified level is treated as adulterant
17. Naturally occurring toxic substances in the food material beyond certain level is
    considered as unfit for human consumption
18. No anti-oxidant, emulsifiers and stabilising agent is permitted beyond the prescribed level
19. No insecticides should be sprayed on the food items
20. Oils can be manufactured only in factories licensed for such purpose.

To fight adulteration numerous laws have been stipulated by ministry of food and related
ministry to check consumer interest and stop malpractices. Following are the acts enacted by
government of India.

- The Prevention of Food Adulteration Act, 1954
- The Fruit Products Order, 1955
- The Meat Food Products Order, 1973
- The Vegetable Oil Products (Control) Order, 1947
- The Edible Oils Packaging (Regulation) Order, 1998
- The Solvent Extracted Oil, De oiled Meal, and Edible Flour (Control) Order, 1967
- The Milk and Milk Products Order, 1992
- Essential Commodities Act, 1955 (in relation to food)
**Conclusion:**

The preamble of PFA laid emphasis only on provisions for prevention of food adulteration. FSSA lays emphasis on consolidating the laws related to food and to establish FSSAI for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption and for matters connected with them. The new objectives clearly go far beyond the
objectives of PFA. The strict penalties imposed in FSSA may lead to increase in corruption, as enterprises may resort to unfair practices to avoid these penalties.

The PFA dealt with countless Government ministries handling different food sectors as per separate orders, like the fruit products order, and other orders related to vegetable oil products, edible oils packaging, milk and milk products and meat food products, which were issued at different points of time and were sometimes overlapping and inconsistent. On the other hand, a unified act like FSSA enables unidirectional compliance. The administrative control of the FSSA has been assigned to the Ministry of Health and Family Welfare thereby establishing a single reference point for all matters and eradicating any possibility of multiplicity of orders or the chance that any coordination problems are caused.

Apart from the harmonization of laws relating to food quality and standards with established international norms, FSSA aims at regulating food hygiene and safety laws in the country in order to systematically and scientifically develop the food industry. Thus, the food processing industry may see FSSA as a mixed blessing but the practical application of this legislation, being at its nascent stage, will require some time to come into full force.

REFERENCES

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