THE PREVENTION OF FOOD ADULTERATION ACT, 1954 (Amended in 1964, 1976, 1986)

The Act provides the protection from adulteration / contamination of food that may lead to the health risk of consumers. The Act deals with the frauds also that can be perpetrated by the dealers by supplying cheaper or adulterated foods. The Act regulates the use of chemicals, pesticides, flavours and other additives in food preparation. Through this Act there is a control over dumping of sub-standards foods. Enrichment of flour, bread, or other cereals with vitamins or minerals, iodization of salt, vitaminisation of vansapati oil, addition of vitamin "C" in certain foods can be done under the provision made in this Act.

Different definitions of food, adulteration, misbranding, etc. are described in the Act (Sec 2). Centre is empowered to appoint an Advisory committee called the Central Committee for Food Standard (Sec 3). In any dispute an adulterated sample need to be examined by the court. The Central Food Laboratories give its final opinion on the subject. These 4 laboratories are located in Calcutta, Ghaziabad, Mysore and Pune. There are approximately 82 food laboratories in the country at district/regional/state level working for the purpose of the PFA Act. Powers are given to the State Governments to appoint Public Analyst and Food Inspectors who control the food supply, storage, and marketing of foods. It is the duty of inspector to draw and dispatch samples to a laboratory. The Central Government is empowered to define the standards of quality, control over production, distribution and sale of food, packing, labeling, licensing, and controlling the food additives.

There is a provision of penalty if anybody break the law for a maximum imprisonment of 1 year or a minimum fine or Rs. 2000 in the first instance and for imprisonment of 6 months which may extend to 6 years and cancellation of license on the second or subsequent offense. There is a penalty for violation of rules with regard to seized article subsequently found adulterated and contaminated with injurious substances. When consumed adulterated food is likely to cause death or injury to the body or amount to grievous hurt can be punished according to Section 320 of the Indian Penal Code. There is an imprisonment of 3 years but which may extend to the life term and with the fine which shall not be less than Rs. 5000. Some of the examples of Adulteration / Contamination are given in Table 52.1

Role of Central Government

The Ministry of Health & family welfare is responsible for ensuring sea food to the consumers. The enforcement of the Act is done by the state/UT governments.

To review the provision of PFA Act, 1954, Rules and Standards in consultation with the central committee for Food Standards, a statutory Advisory Committee under the Act and its 9 Technical Sub-committees.

To conduct examination for the Chemists for their appointment as Public Analyst under the Act;

To organise training programme for various functionaries under the Act;

To approve the State PFA Rules;

To examine and approve the labels of Infant foods.

To evaluate and monitor progress of implementation of the Act in the state/UTs by collecting periodical reports and spot visits;

To liaise with National and International Food Quality Control Organisation such as Directorate of Marketing and Inspection (operating Agmark Scheme), Ministry of Food Processing Industries (implementing Fruits Products Order-FPO), Codes Alimentarius Commission/World Trade Organisation;

To ensure quality of food imported to India under the provision of Act;

To create consumer awareness; and

To augment the food testing laboratories.

Table 52.1 : Food Items with type of Adulteration or Contamination

	Food Items	Adulteration/ Contamination
1.	Non-Alcoholic Beverages	Non-permitted colours, Saccharin, ducin, lead, arsenic and copper, and Dirt and filth.
2.	Baking powder	Citric acid.
3.	Starchy foods	Foreign starches in arrowroot, sand, dirt, etc.
4.	Spices	Sand, grit, coal tar dyes, saw dust, lead or lead chromate in haldi, In shah zeera excessive stalky and woody matter.
5.	Coffee and Tea	Coat tar dyes, excessive stuff, husk, tamarik husk, sand and grit, used tea dust.
6.	Milk	Water, Starch ad abstraction of fat.
7.	Vansapati	Animal fat, excessive hydrogenation Rancid stuff. Sesame oil deficiency, foreign flavour.
8.	Mustard seed	Argemone seeds which can cause epidemic dropsy.
9.	Oils	Mineral oil potential carcinogenic, argimone oil.
10.	Dals	Kesari dal which can cause lathyrism coal tar dyes.
11.	Groundnut	Aflatoxin can cause cirrhosis of liver

EPIDEMIC DROPSY

Problem: Epidemic Dropsy occurrence is common in some parts of the country. An epidemic has been witness in Delhi and neighbouring states and caused many hundred of lives in the months of August and September 1998.

Cause: Contamination of mustard oil with argemone oil which contain a toxic alkaloid, sanguinarine. The sanguinarine interferes with the oxidation of pyruvic acid which accumulates in blood. Seeds of Argemone mexicana (Poppy Weeds) closely resemble mustard seeds which can be easily mixed with mustard seeds.

Symptomatology: Sudden onset of non-inflammatory swelling of legs, glaucoma, nausea, vomiting, diarrhea, fever, dyspnoea, cardiac failure and death may occur in 5%-50% of cases. There is an occurrence of erythematous motting and raised haemangiomas on the skin and mucous membrance. It may affect anybody whoever consumes the contaminated oil prepared.

Test for adulteration:

Nitric acid test: In a sample of oil, nitric acid is added and then the tube is shaken up which give rise to orange-red colour, indicates the presence of argemone oil. It does not give positive result if the level of oil is less than 0.25 percent.

Paper Chromatography test: It is highly sensitive test to detect argemone oil up to 0.0001 percent in all edible oil and fats.

Treatment: Supportive therapy for cardiac failure is effective, but the response may be slow. A high protein diet is beneficial. All contaminated mustard oil must be identified and further exposure avoided. Temporary ban can be imposed for the sale and use of oil. Mass awareness programme is required to control the epidemic. Selling of open oil should be discouraged and manufacturing at the local level without any specification and standard should be restricted.

Reference

Govt. of India. Annual report 2001-2002. Ministry of Health & Family Welfare. Nirman Bhawan, New Delhi 110011