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Research Article

An Introduction to Food Adulteration and Testing- A Preliminary Study

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Abstract

Food is adulterated to improve the quantity and make more profit of any commercial product. The food is sucked of its nutrients and the place where the food is grown is often contaminated. For an instance: Milk is mixed with water, Vanaspati is used as an adulterant for ghee. Ergot is used as an adulterant for cereals. Chalk-powder is used as an adulterant for flour. Chicory is used as an adulterant for coffee. Papaya seeds is used as an adulterant for pepper. Brick-powder is used as an adulterant for chilly-powder, tamarind seed powder is used as adulterant for coffee, wood powder is adulterated for turmeric and dhaniya powder. In the study we have checked some of the common food substances from the local market e.g., salt, turmeric, chilli, milk, honey etc. It was observed in this preliminary study, that some of the spices and sweetening agents of the local market was adulterated as compared to than that of the sealed packed branded one. Adulterated products are dangerous to health of any living organism the customer caution and action can help to improve the situation. However, such efforts are not productive except consumers themselves are aware of their privileges and duties. Under these conditions, consumer literacy is the need of the hour with special attention to low income groups who suffer the most.

Keywords: Adulteration; Adulterant; Additives; Food Safety; Food Inspection

Introduction

Food adulteration is the act of deliberately 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. An adulterant is a chemical substance which should not be contained within other substances beverages and fuels for permitted or other reasons [3].

Detection of adulteration in food is an essential requirement for ensuring safety of foods we consume. The addition of adulterants is called "adulteration". The word is suitable only when the additions are undesirable 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 poisoning [2].

Materials and Methods

In the study we have checked some of the common food substances from the local market e.g., salt, turmeric, chilli, milk, honey etc. We have selected six different food groups as shown in Table 1. for the testing and in that some of the food tested from the branded products and some of the food products from the local markets of the Gandhingar Dist [1,4].

Results and Discussion

It was observed from the present study, that the branded products that we tested were non-adulterated as compared to than that of the non-branded local food products which was purchased from the local market.

Food Products	Common Adulterants
Milk and Milk Products	Starch, Water, Synthetic milk.
Oil and fats	Margarine, Other oil, vanaspati
Sweetening Agents	Non permitted colour, saccharine
Food Grains and products	Boric acid, Coal tar dye, ergot contamination
Spices	Metanil yellow, Powderd Dusk, Chalk Powder
Miscellaneous	Chalk Powder, Common salt

Table 1: Food Products and their adulterants.

All the samples of milk products (condensed milk and milk) were found to be non-adulterated. However, locally available butter was observed adulterated and margarine was present in the butter. In addition, locally available ice cream was also found to be adulterated with starch.

All sweetening agents (sugar and honey) selected for the study were noticed non adulterated because they all were branded.

Food Grains and their products (Wheat flour, Maida) which are locally available in Gandhingar Dist. were found to be adulterated. Whereas, mostly packed and branded products like besan and wheat flour were non adulterated.

Powdered spices like turmeric, chilli and garam masala were found to be non adulterated. However, all the spices which are selling locally unpacked were found to be adulterated in case of turmeric and chilli powder with metanil yellow and brick powder respectively.

It is clear from the study, instead of tackling adulteration and the issue of food safety, the authority appears preoccupied with issues connected with the packaged food industry. It is high time that the food regulator tightened its belt.

Conclusion

It is observed in this preliminary study, that some of the spices and sweetening agents of the local market were adulterated as compared to than that of the sealed packed branded one food product. Adulterated products are dangerous to health of any living organism the customer caution and action can help to improve the situation. However, such efforts are not productive except consumers themselves are aware of their privileges and duties.

Under these conditions, consumer literacy is the need of the hour with special attention to low income groups who suffer the most

Future Aspects

It is suggested from the study that wide range of orientation programs like rural health welfare centers etc. are needed to tackle adulterated food in low-income group. Selection of other rural areas for the tests of the adulteration to reduce the adulterated food. Establishment of simple methods for the detection of adulteration that can be carried out at home.

Bibliography

1. Detect Adulteration with Rapid Test. "Quick test for some adulterants in food". Food safety and Standards Authority of India (2012).

2. Navle and Gupta. "Detection of adulteration present in Milk". *IJLTEMAS* 5.3(2016).

3. V Lakshmi and RV LABS. "Food Adulteration". *International Journal of Science Invention Today* 1.2 (2012): 106-113.

4. Methods for detection of common adulterants in food. Vikaspedia.in/Beware of adulteration.