Food Adulteration

Name – Pragyan Khati

Roll No -26

Subject - Chemistry

**Background**

We all know that the quality of food products is quintessential in regulating the health of population. Whilst most of the food products are sold to the consumers in regulation with the legal terms provided by the government, majority of companies don’t comply with the regulations. Such companies provide products by debasing the quality of the product for the sake of increment in product.

‘Food Adulteration’ is understood as the mixing of non-nutritious ingredients to increase the amount of the products in raw form, be it intentionally or unintentionally[1]. Adulteration is a global crisis, it’s a severe issue inferring major health risks in many countries. There are different types of food adulteration such as : medicines, vegetables, creams so on and forth.

There are many reasons as to why food products are adulterated. Especially in cases where the food products are rip-offs of other established products so as to deliberately establish its uniqueness. Increasing population constitutes increasing demand. However, due to the unavailability of resources, it might not be possible to provide the population with the required products which forces companies into adulteration to conceal losses in the market. Majority of food adulterations are intentional. Nevertheless, unintentional adulteration does exist and pose as much of a threat as intentional ones. Unintentional adulteration is due to lack of proper training facilitated to the food handlers and other workers.

Such adulteration brings nothing but harm to the health of population, giving a boost to the rise of food-borne diseases which is a major blow to the nation in all kinds of aspects. For which, WHO (World Health’s Organization) has implemented some significant regulations. It talks about promoting preventive food-system management, carrying out researches and projects in context with local consumption including food-borne diseases, Continuous surveillance of the food products being manufactured. State members need to assure proper education of food handlers and other workers. There must be serious developments to the food legislation. Various types of national food safety programmes should be organized by member states so as to spread awareness.[2]

However, these regulations for companies seem to be nothing but a bad joke as they carry on with their ill-doings. For an instance, majority of Nepalese are obsessed with fast foods, prominently noodles. However, there have been many cases in the past which led to discoveries where it has been found that it is intoxicated with lead. It is done so to enhance the taste of the product so the consumers are more addicted to it. It has been found that noodles are adulterated with remnants of lead, going against the standard of 0.0025mg/kg standardized by WHO [3]. Similarly, dairy products like dairy, milk etc. are adulterated with starch and water, coffee powders are adulterated with tamarind seeds and chicory powder. [4]

These are just some few cases in paper, what lies behind these papers are horrendous. We can see that companies are shamelessly adulterating food for the sake of profit and such by disregarding the laws and regulations implicated by various health firms. From such observations, one can but doubt the efficiency of health firms, organizations and government officials regarding their stand against food adulteration.

**Objective**

It is clear that adulteration is a serious threat to the health of population. To constitute the component of flourishing health, one must take into consideration the prospect of examining the quality of the products supplied to the demography.

The use of adulterants was first recognized by German scientist Frederick Accum. His work identified many toxic metal colorings in foods and drinks. However, he was bashed by the companies for disclosing the truth. Later, the physician Arthur Hill Hassall initiated studies in 1850s, published in ‘The Lancet’ which led to 1860 FAA (Food Adulteration Act) and other sorts of legislation. [5]

From this, we can verify that identification of adulterates is very significant in marking changes in the field of food products and holds an enormous strength to eradicate the trend of food adulteration.

Hence, the objective of this project writing revolves around detection of adulterates in common food materials utilized in our day to day life.

**Methodology**