ABSTRACT

There is a higher demand for food production and food industry in Sri Lanka expands rapidly. The main problems faced by consumers in the food market are the food adulteration, adding substances injurious to health and labelling with false or misleading statements. The food and drug Act has been established to protect consumers.

This study was undertaken to detect commonly used food adulterants and their effect on the quality parameters of food items. Samples of different food items collected and sent by Public health inspectors from different parts of the country to the Govt Analyst's Department were analyzed by using physical, chamical and microscopical examinations. Presence of adulterants was mainly detected using milk fat and solid non fat for yoghurt, milk fat, lactose and titrable acidity in milk powder, free ammonia, colour, odour, hardness,chlorides and Iron content in portable water, sodium chloride and matter insolubles in edible common salt, total acidity, oxidation value, alkaline oxidation value and iodine value for vinegar, fruit content, sulphur dioxide content and benzoic acid content in ready to serve fruit drinks, free fatty acids, Iodine value and saponification value for fats and oils, reducing and non reducing sugars in Jaggery, total reducing sugars, sucrose, presence of HMF, fructose :dextrose ratio and microscopy for honey, total ash, acid insoluble ash and microscopy for spices and condiment and turmeric powder, Caffeine and microscopy for coffee. water extract, fibre and microscopy for black tea and Reichert, polenske and kirshner values for Ghee.

Quality parameters were compared with specifications given by SLS and food regulations to evaluate the genuineness of food items.

Study showed that some coconut oil samples were poor in quality due to higher free fatty acid values. One sample had been adulterated with palm oil and some sesame oil were poor in quality due to high free fatty acid values.

Wheat flour was detected in a jaggery sample while one of the honey samples had been adulterated with sugar syrup. Some vinegar samples analyzed were poor in quality due to the lack of acetic acid and one of the artificial vinegar samples had been labelled as pure coconut vinegar. A turmeric powder sample was adulterated with rice starch that was also detected in a chillie sample. One of the raw milk samples was adulterated by the addition of water upon abstraction of cream.

These findings could be used to develop a generalized idea on the rate of food adulteration in the country.