

POSSIBLE CONTAMINANTS OF LOCALLY CONSUMED BLACK TEA IN SRI LANKA

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As a refreshing, stimulant and non-alcoholic beverage tea carries a high consumption all over the world. As a reputable exporter, Sri Lanka is very keen about the quality and taste of exporting tea though it is not strictly consider for locally available tea brands. Physico-chemically or biologically, the processed tea can be contaminated during plucking, manufacturing, storing and due to itrespective packing method and materials. As a "health beverage" and "popular drink" for human consumption, there is a special concern among consumers on contaminants that may be present in tea bought from the local market. Ignorance of concerned authorities on quality standards and lack of awareness by consumers toward unfair market behavior may endanger to consumer health. This research study focused to analyses the possible contaminants in one of the mostly consumed beverage in Sri Lanka, tea, from food safety aspect. Therefore Eleven (11) black tea packets under reputable brand names from super markets, Five (05) uncommon black tea brands and Three (03) loose teas commercially available only in retail shops were randomly selected for this study. Black teas in loose form were collected to heat sealed polythene bags. The physical and chemical contaminants were detected by proximate analysis according to ISO 3720 standards and microbiological contaminants were examined according to SLS standards. The moisture content, total ash%, water soluble ash%, alkalinity of water soluble ash%, acid insoluble ash% and crude fibre% of collected samples were examined. Aerobic microorganisms, yeast and mould, Coliforms were enumerated under microbiological analysis. The tea samples which had high content of microbiological contaminants were examined for aflatoxin using a column chromatography-TLC method. When considering the recommended limits and resulted mean values of proximate variables totally they were in normal range which means all the collected black tea categories were prepared according to the ISO standards. Though their Moisture%, Total ash, Water soluble ash%, alkalinity%, Acid insoluble ash%, water extract% and crude fibre% values in normal range, the values which represented microbiological contaminants were higher than the recommended SLS standard limits.

Key Words: Black tea, ISO 3720, proximate analysis, microbiological analysis, aflatoxin

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