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Microbiological and toxicity analysis to ascertain shelf-life of selected perishable and semi perishable products

Gurinder Kaur Khaira
Malwa College Bondli-Samrala, India

The aim of this paper is to undertake microbiological and toxicity analysis to ascertain shelf-life of selected perishable and semi perishable products stored under refrigeration conditions in selected standard storage materials. Samples were stored at 3 to 4oC in the pre selected refrigerator shelf for both microbial and toxicity analysis.For microbial analysis, cottage cheese, cooked dal, wheat flour dough and cake were stored for 2 days, grapes were stored for 3 days; milk (both raw and boiled) and cooked meat was stored for 5 days whereas sauce and other processed foods were kept for 3 weeks. The toxicity analysis on the same foods was done which were stored in stainless steel bin/vessel as the seepage of chromium content into the stored food was to be analyzed. Organoleptic evaluation of selected (refrigerated) food items was done by panel of five judges upon their removal from refrigerator before microbial analysis was performed. It was found that perishable food items were spoiled within a week; semi perishable food items were spoiled after a week, whereas preserved foodstuffs, baked products were spoiled after few months. Milk, non vegetarian foods (except eggs), all vegetables and cooked items were spoiled within a week even under refrigeration conditions. Methylene blue reductive test of milk indicated that boiled milk can be stored in refrigerator condition for 4 days. Seepage of chromium content from stainless steel containers in stored food items resulted in maximum seepage in milk after two days followed by presence of chromium in cottage cheese, cooked meat and wheat flour dough and minimum seepage was observed in cooked dal.

soni.khaira@yahoo.co.in