Microbial Load and Mutagenicity Screening of Top Three Selling Food Supplements in Davao City
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ABSTRACT

Herbal food supplement has become part of daily intake of many Filipinos as majority think that herbal supplements help boost immune system. However, the Food and Drug Administration (FDA) labels these products as having “no therapeutic claims”. Their intake may pose risk to the public if not properly regulated. The study tested the top three food supplements in Davao City drugstores based on an initial survey, for the detection of Staphylococcus aureus, Escherichia coli, yeasts and molds and the products’ mutagenic property. Aerobic Plate Count using Plate Count Agar was employed in assessing the microbial load. In vitro Ames Test using Salmonella typhimurium TA98 was employed for mutagenicity assay. Results showed presence of both bacterial and fungal organisms but their level was within the allowable microbial limit. There was no significant difference in the microbial level among the three supplements and all samples did not manifest mutagenic properties. These results suggest that the investigated products are safe in terms of microbial contamination and mutagenic property, for the public.

Keywords: Medical Laboratory Science, food supplements, Microbial load, Ames test, Staphylococcus aureus, Escherichia coli, mold, fungi, Philippines