

TITLE: MICROBIOLOGICAL ANALYSIS OF FRESH AND MINIMALLY PROCESSED VEGETABLES (*Lactuca sativa* L. var. *crispa*)

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ABSTRACT:

The fresh vegetables market has been growing significantly due to a lifestyle change from the population that is now looking for products that are good for the organism, fast and have a good quality. The fresh vegetables minimally processed are in the spotlight in this market because they are already prepared to be consumed and also are an alternative for the consumer that has no time to prepare its meals. The analysis of the sanitary conditions from the vegetables are highly important taking in account that the biological dangers offered by microorganisms may lead to a appearance of diseases caused by food and contamination indicators are used to guarantee the absence of pathogens into the vegetables. The objective of this project was to analyze the microbiological quality from fresh vegetables and vegetables minimally processed bought in supermarkets from Brasília - DF. The microbiological analysis were made for heterotrophic bacterias, total coliforms, *Escherichia coli* (*E. coli*) and fungos and the results were compared to the current legislation. To make the accountancy of the heterotrophic bacterias a "Pour Plate" method was used, for fungos the used method was "Spread Plate" and for total coliforms and *E. coli* the used method was the chromogenic test from Colilert®, that uses the exclusive technology of Defined Substrate Technology (DST). The results of the study showed that all samples presented negative results for *E. coli*, being in accordance with ANVISA's legislation RDC n° 12/2001, which establish a maximum value of 10^2 NMP/g for these microorganisms. For total coliforms the samples presented values above 10^3 NMP/g, for heterotrophic bacterias the count oscillated between $9,0 \times 10^3$ and $2,4 \times 10^4$ UFC/g and for fungos the count oscillated between $7,0 \times 10^2$ and $1,2 \times 10^5$ UFC/g, indicating an elevated microbial load that may lead to the vegetables deterioration. It can be concluded that all the analysed samples are in accordance with the current parameters of the legislation.

Keywords: Microbiological analysis, vegetables, minimally processed, fresh vegetables.

Development Agency: