

TITLE: MICROBIOLOGICAL EVALUATION OF ALFACE (*Lactuca sativa*) MARKETED IN THE AGROECOLOGICAL AND CONVENTIONAL FAIRS IN ARAPIRACA-ALAGOAS.

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ABSTRACT:

Lettuce (*Lactuca sativa*) belongs to the family Asteraceae, being one of the most consumed vegetables in the world. Because it is a vegetable of consumption "in natura", it requires a monitoring as to the form of production, manipulation and hygiene, to avoid possible infectious diseases, caused by fecal microorganisms. The present work had as objective to evaluate the microbiological contamination in lettuces commercialized in agroecological and conventional fairs in the city of Arapiraca, Alagoas. From both fairs, 3 stalls were selected, in which the market was the producer, and a semi-structured interview was carried out, aiming to know the methods of planting and sanitizing and to draw the profile of the farmer. After the interview, each trader provided 3 lettuce samples. They were packed in sterile polyethylene bags and transported in a thermal box at temperatures of 4°C to the microbiological analysis laboratory of the Arapiraca Agro-Food Technological Pole to verify the presence of total thermotolerant coliforms, *Escherichia coli*, using the Number technique Most Likely (NMP). The analyzes were performed according to methodologies proposed by the American Public Health Association (APHA). The producers reported that they carried out the hygienization of the vegetables by washing about once or twice after collection. However, the farmers confirmed that they did not carry out the sanitization of lettuce. The microbiological results at both fairs were similar in the presumptive test, all samples were loaded above 1100NMP / g. In the confirmatory test for thermotolerant coliforms, samples from both fairs were suitable for consumption, that is, showed total coliform growth ranging from <3.0 to 7.4 MPN / g. To confirm the results, plates containing L-EMB were used and the samples from both fairs were tested. After □24h, all plaques had colonies typical of *E. coli*, colonies with black center and metallic green glow. From the *E. coli* colonies, the indole test was performed, which showed 100% positivity and 94% for the conventional fair and for the agroecological fair, respectively. The results did not show significant differences in relation to the microbial load by the MPN technique, comparing the conventional and agroecological fair. In conclusion, it was found that the microbial load was in accordance with the current legal standards that allowed a maximum load of 102NMP / g for coliforms at 45°C / g.

Keywords: *Escherichia coli*, *Lactuca sativa*, microbiological analysis, thermotolerant coliforms, total coliforms