TITLE: MICROBIOLOGICAL ANALYSIS OF MINIMALLY PROCESSED VEGETABLES MARKETED IN THE CITY OF RIO DE JANEIRO

AUTHORS: REGO, E.F.M.; MIYAHIRA, R.F.; GUIMARÃES, R.R.

INSTITUTION: STATE UNIVERSITY OF RIO DE JANEIRO, RIO DE JANEIRO, RJ (STREET SÃO FRANCISCO XAVIER, 524, 12th floor, BLOCK D, Zip code 20.550-900, RIO DE JANEIRO - RJ, BRAZIL)

ABSTRACT:
Minimally processed vegetables are products, usually fruits and vegetables, which, although physically modified, maintain the freshness characteristics of the product in natura. These products have been gaining ground on the shelves of supermarkets, as consumers seek convenience and practicality in the elaboration of dietary preparations, combined with a greater awareness of healthy eating. This study aimed to evaluate the microbiological quality of ready-to-eat raw leafy vegetables marketed in the city of Rio de Janeiro. Samples of ready-to-eat raw leafy vegetables were purchased from supermarkets in the city of Rio de Janeiro and transported in isothermal boxes to be analyzed at the Laboratory of Food Microbiology of the Institute of Nutrition of the State University of Rio de Janeiro. *Salmonella* spp. and thermotolerant coliforms were evaluated in 10 samples of vegetables, including: american lettuce, purple lettuce, kale, radicchio, chicory, arugula and spinach. In all samples, it was not observed the presence of *Salmonella* sp./25g. However, 30% presented contamination for thermotolerant coliforms above the maximum limit established by Brazilian legislation. These vegetables are in unsatisfactory sanitary conditions and therefore unsuitable for human consumption in accordance with current legal microbiological standards. This result is of great relevance since these ready-to-eat raw leafy vegetables are intended to consume food without the need for hygiene or heating prior to consumption, which exposes the population to the risk of developing foodborne disease. It can be concluded that there are flaws in the productive process of these vegetables. The appropriate hygiene process, as one of the steps of this minimum processing, is an effective method to reduce the microbial load of the food and should be done carefully.

Keywords: ready-to-eat vegetables, microbiological quality, foodborne diseases, coliforms