Microbiological analysis of cabbage (*Brassica oleracea* var. *Capitata*) submitted to treatments with chlorine and ozone

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Researchers have been seeking alternative sanitizers effective against pathogens and spoilage of food, and also safe to humans and environment. The commonly used sanitizers contain active chlorine, because they are easy to use and inexpensive, but can generate carcinogens substances. Ozone has advantages as a high power sanitizer for food, without promoting the production of harmful substances to the body. This study aimed to investigate possible bacterial and fungal contamination in conventional cabbage (*Brassica oleracea* var. *Capitata*) and to verify the effectiveness of sanitizers in treatment of these plants. Cabbages from the same variety, physiological age and harvested at the same time of year were purchased straight from producers in the city of Botucatu / SP. Measurements were made for quantifying fungi, *Escherichia coli* and *Salmonella sp.* on three situations: untreated plants, after washing with water and after immersing for 10 minutes in chlorinated and ozonized water. For microbiological analysis, the vegetable extracts were sprayed in liquid nitrogen and re-suspended in sodium phosphate buffer 0.1 M, pH 7.0 sterile. Aliquots of 0.2 ml of the homogenized material were diluted and seeded in Petri dishes with selective chromogenic environment (Himedia) for the respective microorganisms, were scattered using a Drigalski strap and the plates were incubated at indicated temperatures and growth time. The number of microorganisms was estimated by direct counting on plates, and the tests were double performed. On untreated plants, the presence of fungi and *Salmonella sp* was not detected, and this profile remained the same after washing with water and after treating with chlorine and ozone. However, it was noticed presence of $1.3 \times 10^3$ CFU/g of untreated cabbage, $1.1 \times 10^3$ CFU/g of cabbage washed with water and none on cabbage treated with chlorine and ozone.

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