INTRODUCTION

Recently, there has been great demand for a healthier diet using food products of high nutritional value and in natura. The strawberry (Fragaria ananassa Duch) is a highly perishable fruit and rather expensive. Consequently, the most important problems of this culture are those relating to packaging, transportation and storage. However, with the great demand for fresh foods, questions have arisen about safety and propagation of microorganisms on their surfaces. Thus, this study aimed to determine an appropriate concentration of ozone to reduce microbial activity on the strawberries surface without damaging the scarf-skin.

RESULTS AND DISCUSSION

Strawberries were purchased from Campinas Supply Center (CEASA). The samples were sent to the Postharvest Technology Laboratory (FEAGRI/UNICAMP), where the ones who presented no mechanical damage were selected to receive ozone treatments at concentrations of 0, 0.5, 1.0 and 1.5 ppm. After application of ozone, fruits were stored in BOD at 5°C for 10 days.

Microbiological analyzes were performed for determination of yeasts and molds, mesophilic and psychrotrophic, expressed in CFU mℓ⁻¹ (colony forming units) and total coliforms expressed in MPN (most probable number). After the end of the storage period, the following results were observed: the reduction of molds and yeasts was more significant in strawberries exposed to 0.5 ppm ozone. The final mesophilic bacteria counts were lower for the treatments 0.5 and 1.5 ppm, while for psychrotrophic the most effective treatment was 1.0 ppm. For the control coliform the most effective treatment was the one with the highest ozone concentration (Table 1).

CONCLUSIONS

It follows that the ozone application is effective in reducing microorganisms in strawberries and that each kind of microorganism demands a suitable concentration.

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