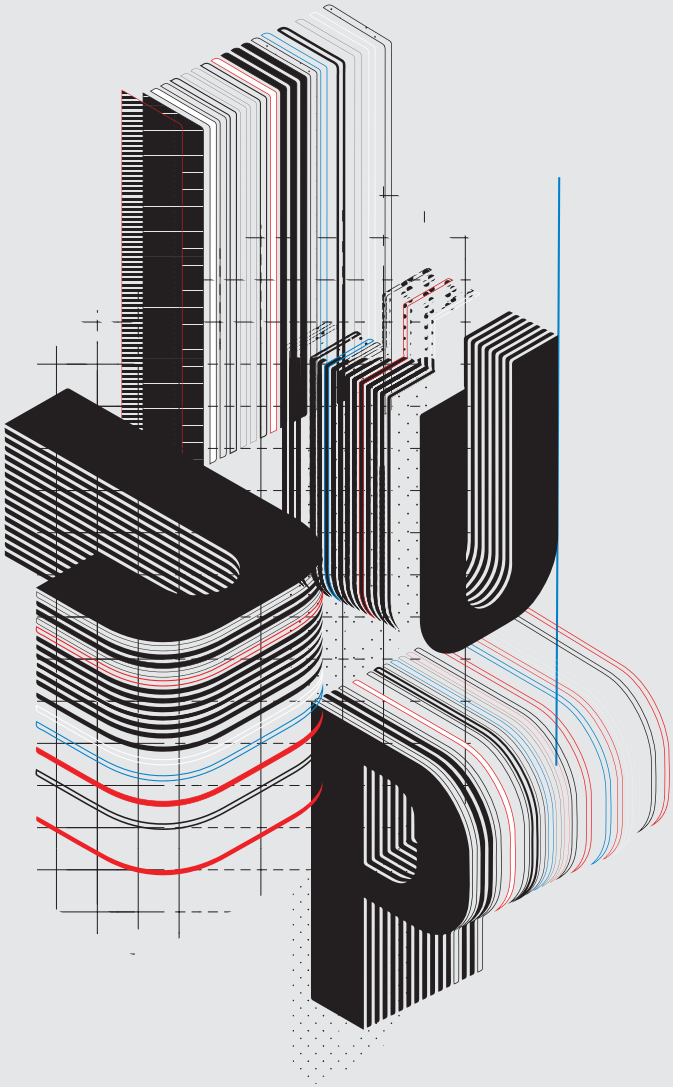
BOOK OF ABSTRACTS

12TH MEETING
OF YOUNG RESEARCHERS
OF **UNIVERSITY OF PORTO**



- ## 15450 | Evaluation of microbiological quality of lettuce sanitized by two different methods and exposed to different times and temperatures of storage in food service units

Cardoso, Maria João, Faculdade de Ciências da Nutrição e Alimentação, Portugal
Ferreira, Rita Amaral, Eurest Portugal, Lda, Portugal
Oliveira, Beatriz, Eurest Portugal, Lda, Portugal
Antunes, Patrícia, Faculdade de Ciências da Nutrição e Alimentação, Portugal

The association between fresh vegetables, commonly served by Food Service Units (FSU), and foodborne diseases led to an increasing awareness of consumers and catering for food safety issues. However, studies on sanitizing methods applied in a real catering context are still scarce. The aim of this study was to evaluate the microbiological quality of lettuce after washing by two methods and storage in salad bars.
We included 96 lettuce samples collected in two FSU after washing (t0) by sodium hypochlorite NaClO-90ppm/5min or tap water and at the beginning and ending of storage on salad bars (lunch-t1/t2, dinner-t3/t4, supper-t5/t6). Microbiological quality was determined by reference methods for enumeration of total viable count (TVC), Enterobacteriaceae/37ºC, Listeria, E. coli, C. perfringens, B. cereus, L. monocytogenes, coagulase-positive-Staphylococci as well as Salmonella detection. Non-parametric statistical tests were used (95% confidence interval).
Samples from t0 showed lower TVC and Enteobacteriaceae loads in lettuces washed with NaClO comparing to tap water (higher number classified as borderline-B). At lunch (t1/t2), TVC and Enterobacteriaceae loads were significantly lower in samples washed with NaClO than the ones washed with tap water ($p<0.05$), resulting in high number of unsatisfactory (US) samples. At dinner and supper (t3-t6), the microbial loads of these parameters were significantly higher ($p<0.05$), regardless of the method used, and most above US limit. This study also shows that TVC and Enterobacteriaceae loads didn´t increase significantly ($p>0.05$) during the 2.5 hours exposure on salad bars. All samples were satisfactory for the other parameters performed, except for coagulase-positive-Staphylococci (n=2/US) and Listeria (n=1/B).
Overall, this study showed that washing with NaClO was more effective than using tap water, and that storage of washed lettuce under refrigerated conditions for future consumption was not recommended beyond lunch